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# INDIA RUBBER WORLD

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HEVEA BRASILIENSIS

DIOPHOS GUTTA

GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 150 Nassau Street, NEW YORK.

Vol. XXVI. No. 3.

JUNE 1, 1902.

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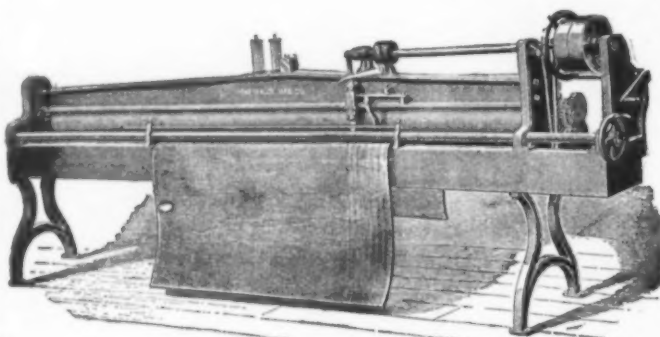
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Published on the 1st of each Month by

## THE INDIA RUBBER PUBLISHING CO.

No. 150 NASSAU ST., NEW YORK.

HENRY C. PEARSON,  
EDITOR.HAWTHORNE HILL,  
ASSOCIATE.

Vol. 26.

JUNE 1, 1902.

No. 3.

**SUBSCRIPTIONS:** \$3.00 per year, \$1.75 for six months, postpaid, for the United States and Canada. Foreign countries, same price. Special Rates for Clubs of five, ten or more subscribers.

**ADVERTISING:** Rates will be made known on application.

**REMITTANCES:** Should always be made by bank draft, Post Office Order or Express Money orders on New York, payable to THE INDIA RUBBER PUBLISHING COMPANY. Remittances for foreign subscriptions should be sent by International Post order, payable as above.

**DISCONTINUANCES:** Yearly orders for subscriptions and advertising are regarded as permanent, and after the first twelve months they will be discontinued only at the request of the subscriber or advertiser. Bills are rendered promptly at the beginning of each period, and thereby our patrons have due notice of continuance.

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Entered at New York Post Office as mail matter of the second-class.

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## BOOK KNOWLEDGE IN RUBBER WORK.

AN American civil engineer who has decided to become a manufacturer of India-rubber goods complains that there is no complete guide to the business published, and that the rubber trade is singular in this respect. He cites other branches of industry, such as iron, glass, pottery, and so on, that have a literature which, if closely and intelligently studied, should give one an intimate knowledge of those particular industries. In this our friend is right to a degree. Provided he be a man of faculty, a natural mechanic, and an acute observer withal, he might do something in the lines cited by the application of book knowledge. It is possible, indeed, that at the end of a series of years he might grow into a great ironmaster, a wealthy potter, or a king in glass manufacture, but the same intelligence and application would place him at the head of some great rubber factory. In any or all of these cases his book knowledge would be supplemented by his constantly varying experience, and that in a short time would constitute his most valuable asset. It is perhaps easier to become an expert potter than to be an all round "rubber man." And the reason is that the rubber business as a whole is an aggregation of results that have come from thousands of complex experiments. The basis of the business is as simple as possible, but the application of the simple theory involves such a variety of changes in practice that it is a common saying among the expert that there are "more things that are not so" in rubber manufacture than in any other of the world's industries. And that is where books of necessity fail the practical man.

## THE NEW "PARÁ RUBBER" FROM THE EAST.

AT a recent auction sale in London six cases of fine rubber from Ceylon, the product of cultivated trees from Pará seed, brought 3s. 4½d., or about 81.4 cents, whereas the highest price for real Pará rubber reported during the week was only 3s. 0½d. per pound. This is not the first instance of exceptionally high prices obtained in the London market for "Pará rubber" from plantations in the East. The declining profits of coffee growing have forced the planters in that part of the world to seek some more remunerative planting, and already thousands of acres are covered with rubber trees under cultivation. Not unnaturally attention has been turned chiefly to Pará rubber, on account of the universally higher price which it commands, and now that the first trees planted are becoming productive, the result of the sale of every little lot exported seems to the planters to confirm their choice. There is no computing how much planting of Pará rubber since 1900 has been due to the sale of 327 pounds, sent from Perak to London in that year, at 3s. 10d.

It is not impossible that these planters may yet be disappointed, for the reason that it remains to be seen whether what they are producing is really "Pará rubber." The tendency in nature is for all species to be influenced by a change of habitat. It appears, for example, that trees of the genus *Hevea*—the source of Pará rubber—when grown

in the East, become productive at an earlier age than in the Amazon valley; again, it is stated that, while in the Amazon forests the seed pods of the *Hevea* uniformly contain three seeds, the number is irregular on the trees in the Malay States, and there are other indications of a tendency to "sport." It is possible that, under cultivation, the tree might in time develop different characteristics even in Brazil, where thus far it has existed only under natural forest conditions. Ultimately new species of *Hevea* may exist, as a result of change of soil and climate, and of transfer from forests to plantations.

We have already expressed our opinion of samples of the cultivated rubber from the Malay States, which, while attractive in appearance, do not really resemble the fine Pará rubber now in use. It is much softer than the Brazilian product, and of much shorter "fiber." It could not be used, for example, in thread, elastic bands, or any fine pure gum goods. In solution it quickly loses its tenacity, so that it would not do for high grade cements. And it readily softens with age. Perhaps some of these defects might be removed by the introduction in the East of the methods of coagulation employed in the Amazon rubber camps, but we are disposed to believe that the Eastern planters have really produced a new grade of rubber, and that the Pará article can never be wholly duplicated by them. It is to be understood, of course, that the rubber is valuable, and will find a ready market at a price which is likely to yield a profit, but such samples as have reached us, valued from the manufacturer's standpoint, would rank at least 25 per cent. below fine Pará.

The good prices realized in London, doubtless, have been due to the cleanly appearance of the new rubber. And they have been based on the judgment of brokers, rather than results of practical tests in the factory. It would seem that the better course for the planters' associations would be, not to try to find how much money can be obtained in the open markets for their sample lots—which then become lost to sight—but to send them direct to a well equipped factory, to be made up in various forms of goods. The manufacturers' test is the one by which the value of this rubber will be judged finally, regardless of what may be the judgment of brokers to-day. We do not mean to dampen the enthusiasm of the planters, but there is such a thing as basing their plans upon estimates of profits that are impossible.

#### THE UNITED STATES RUBBER CO.

THE latest report of this company is of interest as revealing the condition of one of the earliest large industrial consolidations formed in the United States, after an existence of ten years. It is especially interesting because for the first time it appears not to have been prepared with a view to concealing information.

In view of the frequent suggestion that industrial corporations should be required by law to give more publicity to the details of their operation and financial condition, it may be said that while the treasurer's report of the United States Rubber Co. this year is much fuller than usual, it is

difficult to see how the public, or even a stockholder not intimately acquainted with the rubber industry, can gain from it much information that would be of value to the investor in the securities of the company. Then there is a difficulty in the way of compelling the publication of such detailed statements of a manufacturing corporation as is required by law, for instance from banks and insurance companies. The object of state regulation of such institutions as these is to reveal the degree of their solvency. If an insurance company is required to make a statement of its holdings of securities, any person conversant with such matters can judge of the value of the securities named. But the general public could hardly form a judgment of the value of the "investments" of the United States Rubber Co., even if a detailed list were published, since these relate to the capital stock of subsidiary manufacturing companies, whose actual condition is liable to change from year to year. And it would be difficult to draw a line between those companies which should and those which should not be required to reveal the details of their business operation. The United States Rubber Co. is incorporated under the same laws under which some of its subsidiary companies were incorporated, and the mere fact that it is larger than any one of these is not in itself a sufficient reason for compelling its books to be opened to the public.

It might be suggested that any company offering its shares to the public should be required to publish some certain form of statement for the benefit of purchasers of the shares. But this would be of little account if, after a complete statement was furnished, only an expert in that branch of industry could understand it. Under the laws of Massachusetts every industrial corporation in that state is required to file annually a statement of its condition with the commissioner of corporations. But these statements, however fully they may comply with the requirements of the law, would hardly be accepted by any prudent business man as a guide to making investments in the shares of these companies. The fact is, that the public is not obliged to purchase the shares of any industrial corporation, and its best guide, after all, is not any particular published statement, but the character of the individuals entrusted with the management of a given company, together with some intelligent understanding of the nature and conditions of the business in which the corporation is engaged.

The United States Rubber Co. has far from realized all the advantages hoped for through bringing the greater part of the rubber shoe industry under a single control. The enterprise was to a certain extent experimental, seeing that it was practically first in the field of great industrial organizations of this type, and undoubtedly difficulties have been encountered which were not, and probably could not have been, foreseen. It is possible, too, that mistakes in management have been made which the company will be able in future to avoid. From the standpoint of the shareholders, it is an encouraging condition that the managers appear to have adopted a policy of caution, of reducing their book valuation of assets, of selling products at a price which, as far as possible, will discourage compe-

tition, and leaving out of sight the question of dividends until control has been regained of as much as possible of trade which has been lost during the last two years to their competitors. It is not possible that competition will ever be eliminated, and the only hope for the big company is in being able to reduce the cost of production, including administration, to such an extent as to give it an advantage over the independent companies.

So far as can be judged from the late report, the most important promise of economy lies in the direction of superior facilities for buying raw materials. An important fact revealed relates to the amount of crude rubber consumed by the company last year, and the preparations made for the direct importation of this large quantity under the company's own letters of credit. This method of importation has been followed for many years by an important subsidiary company, and it is assumed that the existing arrangements are to be extended to meet all the requirements in rubber in the United States company.

#### SOME RUBBER TRADING EXPERIMENTS.

THE rubber trade is slowly undergoing a change in the direction of lessening the number of hands through which the product passes between the forest and the factory. Naturally it is the expectation of every handler of the crude rubber that a profit shall be made in the transaction. If, at some of the stages, the business is done in a haphazard manner, the risk is greater, and larger profits must be figured on, than under better systematized conditions. Doubtless some such considerations led to the organization of the Comptoir Colonial Français, whose bankruptcy is mentioned on another page. We have referred in the past to the advantages which this company appeared to have—assuming its capital to be real—in having control of desirable rubber fields on the Amazon, of boats, trading stations, and organized bands of workers, enabling the company to send rubber direct from its own estates to the consuming markets. During the first full working season no less than 1,300,000 pounds of rubber were shipped in the company's name from Pará, and that before the decline in prices—which seemed to be a good beginning. We do not know the details of its management, nor how far its capital of 9,000,000 francs has been impaired by concurrent operations in French Africa. But the mere fact of the failure of the company is calculated to cause rubber exploiting enterprises to be regarded with less favor.

A great deal of money has been made in crude rubber in the past, in spite of loose business methods in some of the countries of production, and money is bound to be made in future, since rubber is an actual necessity, the consumption of which is steadily on the increase. It was inevitable that the first attempts to handle the product direct and on a large scale should involve costly mistakes and some failures. But the same thing has been true at first of all large enterprises involving the employment of capital in remote regions. There is no inherent reason why rubber trading should always be unprofitable any

more than gold mining at a distance from where the capital is raised.

There is reason to suspect that one element of weakness in the group of French companies now embarrassed—with an aggregate of more than 18,000,000 francs capital—has been that the financiers back of them have been more concerned about stock transactions than about the details of rubber gathering. There is no telling how much of their capital consisted merely of "shares." But one thing we do know was that the principal intelligence that has reached the world concerning them has been through the bourses of France and Belgium, and it does not require very much argument to prove that the place to make money in crude rubber is not on the stock exchange.

As for an American company being formed to exploit concessions on the French Congo, it may be referred as a matter of interest, as the first instance where it has been proposed to employ American capital in that direction. But with the United States as so large a consumer of African rubbers, it is only natural that the experiment should be tried of gaining the necessary supplies from that quarter more directly than has been the case hitherto. Already more than one important American company has made a beginning in the Bolivian rubber field, and much American capital is ready for investment in the Acre rubber district so soon as certain preliminaries have been arranged. Africa is even more accessible than Bolivia, and may prove as good a field for well directed enterprise.

THIRTEEN IS NO LONGER UNLUCKY, as proved by the success of the New England Rubber Club dinner on May 13.

#### NEW YORK'S FIRE HOSE SUPPLIES.

THE Merchants' Association of New York, composed of business men of prominence, in connection with its work of attempting to secure greater economy in the city administration, is distributing a pamphlet containing a comparison of the cost of government in New York with that of thirteen other leading cities in the United States. In regard to fire hose, it is shown that, at the average prices paid in the thirteen other cities, 124,167 feet could be bought for the amount of money paid for 84,231 feet in New York.

It may be remembered that last year an indictment was obtained against the then Fire commissioner of New York city—whose term of office has since expired—charging him with conspiracy to rob the city by means of the payment of a higher price for fire hose than was usually charged by the rubber manufacturers. It was alleged by the public prosecutor that fire hose could be sold to the city only through one "agent," who was supposed to receive a liberal compensation, which he divided with the Fire commissioner. The case was never brought to trial, but the published references to it suggested that the rubber hose manufacturers had indulged in bribery in order to be able to do business with the city. The manager of a leading manufacturing concern, in a statement to THE INDIA RUBBER WORLD, says:

"This impression is wrong. We have paid no bribes, and there has been no occasion to pay any. We have sold our hose at regular prices to the persons offering to buy the same, and if they have charged the city higher prices, that has been a matter with which we have had no connection."



## RUBBER SHOES IN THE CENSUS.

CENSUS Bulletin No. 171 is devoted to the rubber boot and shoe industry in the United States, during the census year ending May 31, 1900. It appears that the number of establishments reported was 22, against 11 in 1890, and 9 in 1880. The capital employed was \$33,667,533, against \$17,790,970 in 1900. The average number of wage earners was 14,391 in 1900; 9,134 in 1890; and 4,662 in 1880. The total wages paid were \$6,426,579 in 1900, \$3,813,073 in 1890, and \$1,469,038 in 1880. The cost of materials used was \$22,682,543 in 1900, \$11,650,787 in 1890, and \$6,023,053 in 1880. The value of products was \$41,089,819 in 1900, \$18,632,060 in 1890, and \$9,705,724 in 1880. It is noted that, in stating the capital employed, account has been taken of real property and live capital utilized, and not the capital stock of the various corporations.

## NUMBER OF PAIRS PRODUCED.

CLASSIFICATION.	Men's.	Women's.	Children's.	TOTAL.
Boots.....	3,513,421	303,622	623,009	4,440,052
Shoes.....	10,651,684	16,113,746	4,135,463	30,900,893
Tennis.....	1,424,448	346,744	558,089	2,329,281
Arctics.....	4,672,862	2,003,286	971,613	7,647,761
Lumbermen's.....	4,229,899	9,259	145,418	4,384,576
Felt boots.....	147,196	.....	412	147,608
Various.....	47,133	70,698	11,227	129,058

Total..... 24,686,643 18,847,355 6,445,231 49,979,229

Value..... \$27,160,177 \$8,165,695 \$3,435,448 \$38,761,320  
Value of other products—custom work and repairing. 2,328,499

Total value of products..... \$41,089,819

## PRODUCTION BY STATES.

Massachusetts (6 establishments).....	pairs	19,750,961
Connecticut (5 establishments).....		15,375,035
Rhode Island (6 establishments).....		10,090,357
*Other states (5 establishments).....		4,762,876

Total..... 49,979,229

[\* Missouri, 1; New Jersey, 2; Pennsylvania, 2.]

An attempt has been made to report the amount of crude rubber used in the manufacture of rubber boots and shoes in 1900, as follows:

IMPORTED FROM—	Pounds.	Value
Brazil.....	10,891,367	\$9,638,992
Africa.....	4,917,281	3,624,442
Central America.....	1,858,473	1,304,754
Asia.....	17,536	14,580

Total..... 17,684,657 \$14,582,768

Materials purchased in a partially manufactured form cost \$7,641,178, or 33.7 per cent. of the total. This item includes reclaimed rubber, felt goods, chemicals, sheeting, and other necessary materials. "It is impossible to estimate the exact quantity or value of reclaimed rubber used in 1900; many establishments included this item with the cost of all other materials; yet the fact that five establishments reported having used 2,971,806 pounds of reclaimed rubber, valued at \$337,371, shows it to be an important factor in this industry."

As wool and felt boots entered in considerable quantities into some of the finished products of the rubber boot and shoe industry, a summary is given of the statistics of this industry as carried on in 1900 by establishments separate and distinct from those engaged in the manufacture of rubber boots and shoes. There were 5 such establishments, employing \$2,361,871 capital and an average of 1400 wage earners. The total value of products was \$2,742,745.

At Vienna, Ohio, an enterprising woman is said to be earning a good support by the manufacture of paper flowers, which she sells in exchange for rubber scrap.

## THE RUBBER EXPLOITING COMPANIES.

THE work of organization of the Congo and Sangha Development Co., mentioned in the last INDIA RUBBER WORLD as having been incorporated in New Jersey to acquire the concession of the Société de la Sangha Équatoriale, in the French Congo, has been in progress during the past month, but as yet no further details have become available for publication. Meanwhile, the promoters of the company have been in receipt of samples of rubber produced by the *concessionnaire* company in Africa, which are regarded as the most attractive rubber from that continent ever seen in New York.

## COMPTOIR COLONIAL FRANCAIS BANKRUPT.

THE Comptoir Colonial Français was adjudged bankrupt by the tribunal de commerce de la Seine, Paris, in a decree dated April 7, 1902. This is a joint stock company constituted in Paris in May, 1899, with 9,000,000 francs capital, for objects of colonization and commerce, and particularly the exploitation of Caoutchouc. With headquarters in Paris, at rue des Petites Ecuries, 54, the company conducted trading operations at Pará and Manáos, Brazil; stations on both sides of the rio Javay, in Brazil and Peru; at Conakry (French Guinea), and St. Louis (Senegal), West Africa. The company was interested also in the following enterprises, based upon concessions in the French Congo:

	Capital.
Compagnie Française du Congo.....	francs 3,000,000
Société de l'Afrique Équatoriale.....	2,000,000
Compagnie de l'N'Kémé et de l'N'Kéni.....	1,000,000
Compagnie Française de l'Oubangui-Ombella.....	1,000,000
Compagnie Agricole, Commerciale et Industrielle de la Léfini.....	1,200,000
Société Agricole et Commerciale du Sette-Cama.....	1,650,000

The companies named here were all formed in 1899, and, together with the Comptoir Colonial Français, have been classed together, as is customary with French and Belgian enterprises, as controlled by one "group" of financiers. Their close connection is shown by several of the directors serving on the boards of one or more companies, while the name of François Nicol appears in the directorate of all seven. Their shares were listed on Brussels bourse, and some of them for awhile were quoted above par, but for some time past no trading has been reported. In the last INDIA RUBBER WORLD the Oubangui-Ombella company was reported to have definitely given up its concession. The Comptoir Colonial Français was already in litigation, and March 12 the proceedings were begun which ended in the company being declared bankrupt.

The Comptoir Colonial Française reported the collection, during their first season's work on the Javay (1899 1900), of 652,907 pounds of rubber, worth in Europe 2,750,000 francs. They reported having control of 1,235,000 acres of lands. The exports from Pará in their name during the calendar year 1900 amounted to 1,373,840 pounds.

## NEW USE FOR RUBBER MATTING.

A NEW rule that undoubtedly will result in the use of considerable rubber matting has been recently adopted by three large railway systems in the West—the Northwestern, the Union Pacific, and the Southern Pacific. These roads have informed their baggage men that the rough handling of trunks, boxes, and bags must cease. It further provides that the trucks must be provided with a thick pad of felt or other material to lessen the jar when baggage is moved from the car to the truck. Of course a felt pad would soon wear out, and would be a dirty, unsanitary, makeshift at best. Rubber matting is really the only material available, and the day is not far distant when all baggage trucks will be covered with it.



## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

I DON'T know what the case is in the United States, but on this side it is pretty generally the rule for firms to refuse to allow their managers as subordinate employes to give evidence in legal disputes between rival firms, or where another rubber manufacturer is being proceeded against.

## EXPERT EVIDENCE.

Although this decision reduces the field from whence real expert evidence can be obtained to one of very small dimensions, yet there is undoubtedly much to be said in its favor. There is no reason, of course, to suggest that a breach of the ninth commandment would be imminent were various manufactures put in the witness box to testify to the demerits of a competitors' goods, yet the undoubted existence of sharp trade rivalry is enough to cause qualms in the mind of him against whom the evidence is being given. Moreover, the existence of trade rivalry does not presuppose the atrophy of honorable dealing, and a good many manufacturers would just as soon that no suspicion of "hitting below the belt" should exist. They may chuckle inwardly at seeing a rival worsted in a legal encounter, but they much prefer that the *fulmen brutum* was death by some other hand than their own. I am minded to enlarge on this question because I remember once hearing a counsel in a rubber dispute state that the North British Rubber Co. had given an opinion as to the manufacture of some goods in dispute, but that they made it their invariable rule not to allow any of their staff to give evidence in court. How far the opinion of the North British company in the case referred to had weight with the judge I am unable to say, but, under the circumstances, seeing that no cross examination could take place, it hardly seems desirable that such evidence should be offered in court. If evidence in person is not allowed by the company, then it would seem only reasonable that opinion calculated to damage a trade rival should not be paraded by counsel. At least this is how it occurs to me: it is of course quite probable that the use of the North British company's opinion in the above case was quite unauthorized, and I have no wish to be understood as going beyond the mere recording of a fact to indulge in the luxury of a homily which may turn out to be totally unjustified.

THE new building, both architecturally and in its ample dimensions, is certainly a great improvement on that which for so many years attracted the searcher in patent lore and the reader of technical journals. It cannot be said that the library shelf bearing the label "India-rubber and Gutta-percha" is particularly well filled, but that is not the fault of the librarians who have put thereon what technical literature on the subject is available, a prominent volume of course being that written by the Editor of this Journal. ["Crude Rubber and Compounding Ingredients."] The library as far as I have had experience of it cannot have the complaint of vitiated atmosphere brought against it. Probably recent advances in hygiene have had their influence to obviate defects in ventilation which are so painfully apparent in the British Museum library, for instance. But whether this is so, or whether the result may be attributed to the comparatively small number of readers to be found present at any one time, is a matter of no great import. The effect is of more interest to the brain worker that the cause on which it depends and it is a pleasure to be able to testify to the admirable nature of the arrangements. Probably the librarian

## THE NEW PATENT OFFICE LIBRARY.

and his assistants rarely if ever look beneath the covers of the various technical journals under their charge, but as THE INDIA RUBBER WORLD appears on the tables, there is a remote chance that these few remarks may catch the eye of some one in authority.

WITH regard to the interesting notice in the March INDIA RUBBER WORLD of the sunning of vulcanized rubber goods, I

SOLARIZATION OF RUBBER GOODS. speak under correction, but I doubt if the process is in use at all in Great Britain. I was quite under the impression myself that the use

of the solar rays in this way had never been actually put in practice, although suggested very many years ago. With regard to its general application, the absence of strong sunlight for a great part of the year in many British rubber manufacturing centers would seem to be a serious drawback. We seem to have an analogy in the use of the windmill; it is awkward to be dependent on a force which is not under control, and which cannot be called into being at the will of the manufacturer. As suggested in the article, the use of the actinic rays in this way certainly raises strong doubts as to the correctness of the general idea that sunlight is destructive to vulcanized rubber goods, but I suppose that it is largely a matter of time, and it is in the brevity of the exposure in the sun curing process that safety and success lie. Increase the time of exposure to something approaching that which goods are expected to last when in use and there would assuredly be a different tale to tell.

THE triple angled revolving spreading machine gage patented by Mr. William Coulter some few years ago has, I understand,

## SPREADING MACHINE GAGE.

quite borne out the expectations entertained by those rubber manufacturers, both in Great Britain and on the Continent, who have given it a trial.

The fact that the North British Rubber Co. have placed twelve in their mills is a safe indication of merit, and one on which the patentee not unnaturally lays stress, when endeavoring to combat opposition or to convince those who view such novelties with complacent indifference. Space does not permit here of entry into minute detail, but a word or two seems desirable. The improvement consists in the application of a revolving gage with different angles for the various classes of work to be spread. Material is in this way saved as a sharp angle gage will use less dough especially in first coating than a deep one, afterwards in proofing up with a more blunt gage a more thoroughly waterproof sheet is claimed to be made than if the sharp angle gage had been applied throughout the piece. It used to be rather a common excuse among workmen that the gage of their machines was too heavy or too light for the particular work given out, but it will be seen that with the revolving gage such complaints are inadmissible. Messrs. Joseph Robinson & Co., the rubber machinists of Springfield lane, Salford, Manchester, are the makers, and will give any desired information.

AS I write, at the opening of the lawn tennis season, a rather perturbed state of mind is prevalent among club secretaries with regard to the balls. For years "Ayres regulation" have been the best quality, or, at any rate, have had the highest reputation, and have been universally adopted by the leading clubs and in tournaments. This season, however, Slazenger's balls are to be used in the tournaments, a change that has excited a consider-

## LAWN TENNIS BALLS.

able degree of comment among the rank and file of players. It may be said that, although various firms sell tennis balls under their own name or mark, there are really only two or three actual manufacturers of the rubber ball, which may be purchased by the middlemen either complete with melton covering, or uncovered. At the present time the firms who make the balls largely are the Silvertown, Macintosh, and Irwell companies. Exactly to what extent Continental competition has affected the above firms I am unable to say, but I do not think it is a serious matter.

In a recent paper by Mr. G. W. Newall, in the *Marine Engineer*, on the uses of India-rubber on board ship, it was stated

IRREGULARITIES  
IN TRADE  
NOMENCLATURE.

in the prolegomena that a sharp distinction existed (presumably in the trade) between the terms Caoutchouc and India-rubber, and that while the former referred specifically to the raw rubber as imported, the use of the latter term was restricted to the vulcanized product. Now I do not know to what length Mr. Newall's acquaintance with rubber and its technology has extended, but I must say that in my own experience, which has long passed the first decade of its existence, I have not come across any one who recognized this distinction, or at any rate who expressed himself in so confident a manner, and I must say that when reading the sentence I rubbed my eyes to make sure that I was not under the spell of some illusion. The matter is, perhaps, not one of the first importance, but still it hardly seems desirable that it should go altogether unchallenged, as it is calculated to cause a certain amount of confusion in the minds of buyers of rubber goods. In saying this, with regard to existing facts, I don't wish to be understood as saying that any such distinctive appellation is undesirable, or that there are no grounds for its advocacy because, no doubt, in common with many others, I feel that the term India rubber as used in regard to manufactured goods is decidedly lacking in definiteness. The term India-rubber may be appropriate in every way when applied to such goods as cut sheet or elastic thread, but loses all its significance when referred to mixtures of minerals made to coalesce by the addition of a modicum of rubber. But to pass on to another point, I don't think that the somewhat uncouth word Caoutchouc used by Mr. Newall has much vogue in British rubber manufacturing circles, whatever may be the case in France and Holland. The prevailing uncertainty as to its correct pronunciation has, perhaps, acted as a bar to its increased oral use, though personally I much prefer the word Caoutchouc, with all its potentialities for mispronunciation, to that of "gum," which, from a chemical point of view at all events, is entirely misleading. Writing in an American journal I recognize that I am here on somewhat holy ground and shall not pursue the subject beyond entering the disclaimer.

As regards the recent London automobile show, a tire that has been a good deal talked about is the Sewell's suspensory tire, which, shortly speaking, seems to be the old ball tire revived; that is, a rubber rim to which are attached numerous contiguous pneumatic rubber balls. The idea, of course, is to minimize trouble caused by puncture. With regard, however, to something that has undoubtedly come to stay, to judge by what we hear from automobilists mention, should be made of the Goodyear pneumatic tire, from America, which is being so largely fitted this season by the Daimler Motor Co. These tires have recently been fitted to the Daimler car used by the King, instead of the solid ones which he has hitherto used. With respect to another motor tire, which calls for reference here, things have hardly advanced to a stage at which I can speak with confi-

dence. This is the Martin Tyre Syndicate, of which Mr. Tomlinson, of Preston, is the chairman and moving spirit. It is a pneumatic but without an inner tube. I should say that the runs made with this tire from one end of Great Britain to the other have shown it to be possessed of sterling properties. With regard to price, it certainly has an advantage over others that are being much talked about, and this is a consideration that cannot be ignored by those wishful of gaining the motorists' favor. From all accounts the motor tire business is on the eve of a substantial increase and it is not surprising that increased activity is being shown by inventors in order to share the prospective plunder, to use the term in a sense not meant to be invidious.

THIS old-established rubber substitute manufacturing firm has recently been reconstructed and is now quite independent of any connection with Messrs. Broadhurst & Co., Limited, India-rubber manufacturers.

The two directors who now have sole control of the business are Mr. O. M. Wihl, of Messrs. Edward Wihl & Co., 17, Nicholas street, Manchester, and F. Murgatroyd, of Messrs. Trevar, Murgatroyd & Co., accountants, Manchester. Mr. Ireland, of Widner, who had been announced as a director, has retired from any active participation in the management. The practical work is still carried on under the control of Mr. G. H. Scott at Hayne Bar Mill, New Mills, near Stockport, and under his able supervision there is no reason why the firm should not experience an era of prosperity, though, of course, with the greatly increased competition in substitute and recovered rubber, the profits of former days are hardly likely to be realized.

THE recent resignation of Mr. F. A. Byrne from the Dunlop rubber works at Birmingham has caused some little surprise.

NEWS  
IN BRIEF.

The Byrne family are now quite unrepresented in the management of the company at either of its rubber mills. Mr. E. J. Byrne I presume still holds the post of advisory expert to the company to which he was appointed a year or so ago at a high remuneration.—At the recently held annual meeting of Messrs. Charles Mackintosh & Co., Limited, a dividend at the rate of 11 per cent. for the past year was declared. Mr. F. H. Smith, the chairman of the directors, presided.—A general meeting and dinner of the India Rubber Manufacturers' Association was held on May 8, at the Queens Hotel, Manchester.—An important cable works combine has just been announced, though rumors concerning it have been current for some time. This is the union of the Telegraph Manufacturing Co., Limited, of Helsby, near Warrington, with The British Insulated Wire Co., Limited, of Prescott Lancashire. Considering the independent position hitherto maintained by the Helsby company, the proprietors of which, Messrs. Taylor, have built it up from small beginnings, the new arrangement has come somewhat as a surprise. Following, however, as it does on the Callender-Henley combine, it rather points to the fact that, despite the good dividends paid by cable firms during the last few years, the business is not one of which the future can be viewed with perfect confidence. This opinion is borne out by what Mr. James Taylor said at the extraordinary general meeting of the Helsby company, held at Liverpool on May 9 to ratify the sale of the company to the British Insulated Wire Co. The name of the joint concern has not yet been decided upon, nor have the terms on which the Helsby sold their concern been stated, though there is no doubt that the recent decline in the value of the Insulated Wire Co.'s shares has been to the advantage of the shareholders in the Helsby company in the bargain which has just been concluded.

MOTOR TIRE  
NOTES.

## THE RUBBER INDUSTRY IN THE PERUVIAN AMAZONIAN BASIN.

By H. Guillaume, F. R. G. S. (Southampton).\*

THE rubber industry of the upper Amazonian basin is centered at Iquitos, a Peruvian port which has risen from the status of a fishing village to a wealthy town of 7000 inhabitants, consisting of natives of Peru, half castes, and Jews who have migrated from Gibraltar, Tangiers, and Morocco. I am indebted to my friend Mr. Melville G. Clayton, an English engineer who in 1899 took out a Chiswick steam launch for service on the upper affluents of the Amazon, for detailed information from his three years experience in that region.

In 1897, the United States cruising corvette *Wilmington* arrived at Iquitos, her officers receiving a most hospitable welcome from the merchants, who carry on an extensive and expanding commerce with the States; the opportune visit naturally strengthening the commercial relations between the two countries by demonstrating facilities. Rubber has been the stimulating objective, bringing commerce, civilization, and developments, to what was not long ago a veritable *terra incognita* and hunting ground of numerous tribes of savages and cannibals; now gradually becoming, by means of barter and trading, important factors in aiding the white man to collect the vegetable gold of the forest—hitherto quite inaccessible—now one of the most important items of commerce.

It is the construction of railways and fluvial steam navigation, which are destined to give life and movement to the immense wealth lying dormant on the flanks of the Cordilleras and which through their agency will spring up in a magical manner. The new railway just authorized from Oroya to the rich copper deposits of Cerro de Pasco will doubtless prove of enormous service, being near to the navigable waters of the Perené, Pachitea, Apurimac, and Rio Camba; thus offering easy access to the Pacific, via Lima and Callao to Liverpool. Many obstacles have checked development in the upper Amazonian basin, which is still in a state of semicivilization, but by the expanding influence of steam and electricity, combined with the perseverance of bold energetic pioneers, impediments must gradually be removed, and communication with the Pacific and Atlantic facilitated. The Washington government, in order to obtain trustworthy data for its hydrographic department, despatched the aforementioned steam vessel of 1392 tons displacement, with a draught of 10 feet and length of 250 feet, with 1600 I H P., to Iquitos; a port 2000 miles from the ocean. The visit enabled much information to be gathered, the steamer returning with many specimens in natural history and botany, and the voyage proving of great value to the general public.

The *Wilmington* having many feet to spare in her anchorage at Iquitos, all doubts as to the navigability of the Upper Amazon were removed, and at the junction of the Javary, 315 miles east of Iquitos, there were found 18 fathoms, while craft of 800 tons can steam to Borgas, 600 miles west of Iquitos. The

impediments to communication imposed by the lofty snowy Andes, the rapid torrents of the slopes, and the hostile native tribes established on the margins of the rivers, will be gradually overcome by civilization, and one of the notable workers to achieve direct communication from the Pacific to the Amazon is the indefatigable Dr. J. Capelo, an eminent Peruvian engineer, who, despite the difficult task, expensive work, and objections from many compatriots, has succeeded in constructing a serviceable road from the Oroya terminus of the Transandine railway, to the navigable river Pichis; and from this point traffic is conducted with Iquitos, by means of shallow draft steamers fitted with the Thornycroft chambered screw, working in only 2 feet of water.

This road has rendered the valley of the Ucayali accessible to the rest of Peru and established easy intercourse with Iquitos. The postal time from Lima to Iquitos is now reduced to 12 days, viz.: Lima to Pichis 7 days, and Pichis to Iquitos 5 days, but it takes 13 days to ascend the rivers Ucayali, Pachitea, and Pichis, making 20 days to return to the capital. The river Ucayali and its tributaries form the chief center of the rubber industry, along the banks of that great fluvial highway, and many trading stations and colonies have been formed on the lower part of the Ucayali, containing 1500 inhabitants, who form the various expeditions sent out to collect rubber in the forests.

The Pachitea river, a tributary of the Ucayali, is 825 miles from Iquitos, the Pachitea itself being 191 miles and the Pichis 79 miles, making a united total of 1095 miles. The time taken to ascend is 13 days, while the descent is practicable in 5 days. The chief port on the Pachitea is called Port Victoria, in honor of the late British queen. It is the residence of Senhor Pedro Oliveira, a Brazilian who conducts extensive trading in rubber, his chief properties being on the Palcazú. The port is well situated at the confluence of the Pichis and Palcazú, and is destined to become a place of considerable importance. Telegraph communication is established from this point to Lima. Owing to the extreme sinuosity of the Pichis and its shallow depth—only admitting steamers of 2 feet draught—it is recommended by Mr. Clayton that the road should be extended to Port Victoria, to which point steamers can ascend, drawing 3 feet of water always; but if the road were carried direct to the Ucayali, there would be 9 feet of water there at all times. There is still an immense area of virgin forest where rubber abounds, as yet untouched, such as the upper affluents of the Ucayali, the Tambo, Mantaro, Ene, Pangoa, and Apurimac, which have hitherto been unfrequented by the traders on account of the hostility of the Indians. The headwaters of the Madre de Dios and the Purús are reached by the affluents of the Urubamba and the Mishagua, where only recently trade has been carried, and whence increasing supplies of rubber are coming forward. M. Delfino Fiscarrald, of Iquitos, carries on the bulk of the trade in that region. The *pampa* of Sacramento, which is 100 leagues long by 40 wide, also contains unexplored forests.

The Indians of the Ucayali are estimated at 40,000; the Cármas being the chief tribe, growing semicivilized, and helping to collect rubber. They are copper colored, and are thought to be descended from the Incas. They wear a loose gown called *cushma*, woven from wild cotton. Other tribes such as the Piros, the Cónibos, and the Shipibos, are expert canoeists,

\*The author of this paper was for many years the Peruvian consul general at Southampton, England, where he is still engaged in mercantile interests. In THE INDIA RUBBER WORLD of December 15, 1893, he wrote at length of "The India-Rubber Industry in Amazonian Peru," giving much information of value regarding the rubber resources of that region—the development of which has been delayed by the remoteness of the country from commercial centers and the limited transportation facilities. It appears now, however, that conditions are more favorable for Peruvian enterprises, besides which a higher price level for rubber has been attained. An excellent map showing the location of the rivers referred to in this paper appeared in THE INDIA RUBBER WORLD of December 15, 1893, and an other map covering the same territory was given in our issue of October 15, 1894. —THE EDITOR.



hunters, and fishers. The indians hold feasts, when they paint their faces with the red dye called *achote* or *anatto* (*Rivina orellano*). They drink freely the fermented liquor *chicha* made from the root of the yuca or manioc, and gash their heads to display courage. It is part of their worship to drink, thinking that the happier they are the better the Creator will be pleased. All trading is done by barter, the whites supplying them with many useful articles, from a mirror to a Liège gun, which soon becomes useless, being of a cheap character but showy appearance. When bargains are made for parcels of rubber to be brought for a certain article, they keep the contract faithfully.

Mr. Clayton says the general word used among the Shipibos, Cónibos and Cámpas for rubber, is *sandouga*. When asking them for that article, you name the word, motioning that they should bring it from the forest, and at the same time showing them a gun, shirt, or machete. If you wish them to collect it in your absence, it is customary to give a present of a machete or axe, for instance, and by signs show them that you are going up or down river, as the case may be, and that you will return again in a certain number of days. This latter is done by describing an arc with the arm in a vertical position to indicate noon, and with each sweep of the arm close one finger of the other hand, which should be held at the same height, and at the side of the face. Among tribes whose language you may be acquainted with to a slight extent, it is the rule to use the word "to-morrow" which in Cápma for instance is *yau-cha*. Suppose I wish to tell a Cápma that I am going up river, intend to return in five days, and that I wanted some rubber; I should first show him a present, then say "sandouga" until he seemed to understand, then make motions as if paddling a canoe, and say "yaucha" five times closing a finger with each word. Then point to the spot where you are standing and say "sandouga," then indicate with the fingers how many machetes. For instance, you would give so many for a pile of rubber, such as you think they can get together in the time.

There are about fifty steamers employed by the merchants of Iquitos in collecting rubber from the various tributaries. The names of the chief rubber merchants at Iquitos are:

L. T. Morey. (French house.)  
A. Morey. (French.)  
Marius & Levy. (French.)  
Pinto Irmaos. (Brazilian.)  
Wesche & Co. (German.)  
Kahn & Pollock. (French.)  
Hernandez Maque & Co. (Peruvian.)

Although the climate of Iquitos is humid, it is healthy, the average temperature being 87° F. There are few deaths from fevers and other diseases.

The principal tree yielding the rubber is the common "Caucho" (*Castilloa elastica*), which is found growing profusely in all parts. It is invariably cut down, as it yields milk from the whole of the trunk, but the *Hevea* is only tapped, as it only yields juice from between the bark and stem. Although entire forests of Caucho has been destroyed, the ground is quickly covered again with the trees, from the roots or seeds left in the soil; and in six years are fit to be again felled, so rapid is the growth. The juice of the tree is caught in trenches made in the ground, the coagulation being effected in two days. The best quality of gum is that produced by the Seringas,\* which are found growing in isolated spots. Paths, called *estradas*, are made to the groves, an *estrada* consisting of 150 trees, each of which produces annually 10 shillings worth of rubber.

\* The trees known in the Amazon region by this name are those designated by botanists as the genus *Hevea*.—THE EDITOR.

All communication is kept up by launches and canoes. The most effective kind of launch is of the Thornycroft type, driven by propellers that work in tunnels, as they exert more power than stern wheelers, and are useful in water of only 2 feet. Protection is given to the crew against attacks by indians. The Cápmas and Cónibos often enter the Pampa de Sacramento, attack the savage Cashibos, and make captives of them; carrying them off to sell to the rubber gatherers, who make them work. In time they become accustomed to civilized people, who give them food and clothing. Thus they leave barbarism for civilization, and although it may appear to be a cruel treatment, it seems to be the only way to render them docile, and of utility to the settlers. Game abounds, peccaries and deer giving good sport. There are plenty of partridges and ducks, and the monkey is reckoned a favorite dish on the river.

Mr. Clayton says that European immigration can certainly be established in these regions, but the colonists must be supplied with provisions by the government, and brought to them by the launches regularly during the first year. There might also be some arrangement made with the colonists for them to plant a certain number of rubber trees, to repay the government expense, and the government could recoup itself by a rubber monopoly. The prefect, Colonel Portillo, is anxious to welcome English and American citizens to help to develop these great regions, so rich in every product. Señor Portillo also advocates the construction of a road from the English colony on the Perené, to the Tambo affluent of the Amazon; to give an outlet for cattle and produce to the Amazonian ports and settlements, along with produce to Europe and the outside commercial world.

The English colony on the Perené was formed by the European company known as the Peruvian Corporation, which acquired from the Lima government 1,250,000 acres of land, extending for a distance of 40 miles along the banks of that river for a distance of 12½ miles on both sides of the stream. The land is rich in all products, as well as in gold and other minerals. Petroleum has been discovered near the area, which also contains carboniferous seams. The climate has proved to be one of the finest and most healthful in the world, on the testimony of Mr. A. L. Bicknell, F.R.S., and other travelers who have visited the country, and who share the opinion that the true route for exports from the colony should be through the river. Only a road of 40 miles is needed to reach a navigable port on the Tambo; whence a service of steamers to Iquitos will place the colony in direct communication with England and the United States.

#### NEW RUBBER COMPANIES IN PERU.

RICHARD R. NEILL, United States secretary of legation at Lima, Peru, reports to his government the formation of a rubber company in that city, with a capital of £26,000, to operate in the province of Sandia, department of Puno, Peru. This is near the Bolivian boundary, and convenient to Lake Titicaca, whence rubber may be shipped by rail to Mollendo, on the Pacific. A reference to this district appeared in THE INDIA RUBBER WORLD April 1, 1899 (page 178). Mr. Neill reports that another company will take possession of 50,000 hectares (=177 square miles) of rubber lands near Marcapata, in the department of Cuzco and east of the city of that name. It is also reported that an individual enterprise in the neighborhood of Marcapata gives employment to 500 rubber gatherers. "Denouncing" lands in the public domain costs little, though the measurements of concessions is expensive—say £1000 for 30,000 hectares (=74,130 acres). These enterprises, by the way, are located in a different field from that described in the foregoing paper by Mr. Guillaume.



## CAUCHO GATHERING ON THE UPPER AMAZON.

By Lyonel Garnier (Manáos).

THE Caucho\* tree is always, or nearly always, surrounded by saplings, which of course are not cut with the parent tree. Therefore the Peruvians calculate that in thirty years it should be possible to obtain a fresh crop from the ground already worked over. As Caucho cutting was only begun here in 1885 or in 1886, and then only on a comparatively small scale, it is impossible to say how far this theory has been borne out in practice. I may say, however, that Dr. Juan d' Arguilla has sent out men to go over his estates on the Ucayali, where Caucho was exhausted in 1888, and that he hopes to cut the next year. I have myself seen on the Marañon [upper Amazon] young Caucho trees, six or seven years old, growing up around the felled trunk of the parent tree, so that I think it very probable that ere long the Colombian and Peruvian forests will regain their old status.

As to the yield of the Caucho tree: In my two years' experience in Peru, Ecuador, and Brazil, cutting Caucho with my own hands, I have frequently encountered trees giving 18 to 26 kilograms [= 39.6 to 57.2 pounds] of slab Caucho on the spot, but of course you must remember that Caucho loses 70 to 80 per cent. of its weight in the voyage to Pará or Manáos.

From what I have read in the THE INDIA RUBBER WORLD, it appears that in Mexico the *Castilloa elastica* trees are tapped, as if they were *Heveas*. I have asked several Peruvians as to this method of extracting latex, and they all consider it wasteful—

1. Because by this method only from 2 to 7 kilograms of slab Caucho can be obtained on the spot.
2. Because after five or six tapplings the tree dies anyhow.
3. Because by felling the tree, a yield is obtained of from 12 (at the least) to 18 or even 30 kilograms of slab Caucho. That is, a tree yielding 2 kilos per year for five years, gives a total of only 10 kilos, whereas by felling it, 12 kilograms may be obtained at one operation.
4. When a tree is tapped to death, the saplings die off, and so do not replace it.

Yet on the Putumayo, in the newly opened Caucho district in Colombia, the Caucho trees are invariably tapped.

There are two trees yielding the product known as Caucho, which the Peruvians style *caucho blanco* and *caucho roja*, or white and red caucho, according to the color of the bark. The white variety is the one I have referred to throughout. The so called "red caucho" gives a very poor yield, hardly 5 kilograms, and it is rarely cut. I have cut only one myself, which, after eight hours of jolly hard work, gave the enormous amount of 4½ kilograms of slab Caucho and about ¼ kilogram of ball. Yet it was a regular forest giant, 9½ feet in diameter. The picture in THE INDIA RUBBER WORLD of October 1, 1901, [page 9] seems to be of a very small Caucho tree. I should reckon its age at eighteen to twenty years. Here on the Amazon the Caucho is one of the biggest trees, hardly ever measuring less than 6 feet in diameter, and I have heard of them reaching 13 feet. The biggest I ever cut had a diameter of 10 feet;

it gave 28 kilograms [=61.6 pounds]. Of course the diameter of the tree is much increased by the *sapucemas*, as we call them—a species of flying buttress running up some four feet from the ground.

The process employed for obtaining the latex is as follows:

1. Gash the branches with a machete.
2. Gash the *sapucemas* and leave the tree three days.
3. Fell the tree.
4. Gash the trunk.
5. Collect the latex.

The latex from the gashes made before felling the tree gives the "ball" and "scrap" Caucho; that from the trunk the "slab." The usual proportion of ball and scrap to slab is 1 to 6. A tree giving 24 kilograms of slab Caucho, therefore, should yield 4 kilograms of ball, which is marketed here as "Caucho sernamby," the larger product being known simply as "Caucho." The coagulation is effected with soapsuds, though occasionally certain plants and roots are used instead.

I cannot for the life of me make out why people should plant *Castilloa elastica* instead of the *Hevea*. I am assuming, of course, that the *Castilloa* of Mexico and Central America is the same as our Caucho. I tried my hand last year at planting rubber in the suburbs of Manáos. I planted 100 saplings [cuttings?] each of *Castilloa* and *Hevea*, and 50 seeds of each. None of the *Castilloa* seedlings lived, and 30 of the saplings died. Of the *Heveas*, 14 saplings and 42 seedlings died. The remainder are all thriving. They were planted in clayey soil, on an incline, with northwestern exposure, and in the shade of banana trees. In the state of Grão Pará there are some plantations of *Hevea*, but none, I believe, have yet been tapped. Many rubber men in this region are planting a few saplings [cuttings?] along their *estradas*—say 20 or 30 each per year—by way of experiment.

As to the yield of *Hevea*: On looking over my notes I find that the average yield per tree of sixteen *estradas* (in widely scattered districts) in which I have worked, was 1½ ounce per day, exclusive of the scrap collected from the trunks at the end of the week—say ¼ ounce per tree.

Manáos, Brazil, April 12, 1902.

## COMMENT BY THE EDITOR.

It is apparent, from the preceding article, that there are yet points bearing upon some important Rubber species which are not yet generally clear. For example, botanists have reached the conclusion that the South American trees yielding what is known commercially as "Caucho" [Spanish for Caoutchouc] are identical with the tree yielding the rubber known as "Centrals." This is the tree native to Mexico and Central America, designated as the *Castilloa elastica*, and now being planted extensively. But Senhor Garnier's description of the Caucho tree, based upon his experience as a *cauchero*, will not suggest to the planters in Mexico a very strong resemblance to the tree with which they are concerned. The wide spreading base of the Peruvian tree trunk, and the growth from its roots of "saplings" which in time replace the felled parent tree, are unusual in the Mexican species.

But this question of identity is less important than another point mentioned by Mr. Garnier—that there are different Caucho trees, even in the Amazon valley, some of which do not repay cutting down. In Central America, as noted in a

\* Rubber in Peru, where Spanish is spoken, is called "Caucho"—which is Spanish for Caoutchouc. The Peruvian rubber is, for the most part, different from Pará rubber, and in order to preserve the distinction, the Spanish term Caucho is applied to it in most markets.—THE EDITOR.

monograph by Mr. Th. F. Koschny, there are no fewer than three different kinds of *Castilloa*—not counting the "Tuno" tree—varying in the amount of their yield of rubber. There is a possibility, therefore, that not all the *Castilloa* plantations now being made will prove productive, for the reason that the seeds planted may in some cases have been gathered from valueless trees.

As for Mr. Garnier's remarks upon the fatal results to the Caucho tree of tapping, the experience of the Peruvians is not necessarily conclusive. In the collection of Pará rubber—from the *Heveas*—some trees yield indefinitely while others are soon killed, according to the degree of care in tapping. Observations made in Mexico would indicate that a permanent annual yield may be had from the *Castilloa* by proper management. As to our correspondent's wonder that any rubber tree but the *Heveas* should be planted, it is only necessary to suggest that there are rubber producing areas in which the Pará tree will not thrive.

The data given above on the yield of *Hevea* fail to include any statement of the number of times the trees are tapped during the season. With the daily average yield mentioned, the product of a tree tapped 100 times in a year would be 9 pounds 6 ounces of good rubber, and say 2 pounds of coarse. But, as we have mentioned in several recent issues, the length of the season and frequency of tapping are by no means uniform.

#### NEWS AND VIEWS FROM MANAOS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The Brazilian nut crop now being over, the landholders are turning their attention to the rubber crop for the coming season, and already large shipments of goods have been made from Manáos to the rivers Juruá, Purús, Japurá, and Madeira, and rubber is trickling in from the Enbira, Tarauacá, and other affluents of the Juruá. The nut season has been very poor, as regards both quantity and price.

The production of Upriver rubber is not expected to be so large during the coming season, for many people are saying that rubber at 4 \$ 500 Brazilian is not worth working. Yet the receipts are larger to date than last year at this time. The price here is equivalent to 50 and 55 cents a pound for fine, and further up it is selling at 25 to 30 cents.

As indicating the tendency to introduce modern improvements in Amazonian towns, it may interest some of the readers of THE INDIA RUBBER WORLD to know that an electric lighting plant has been installed at Labrea, on the river Purús, at the point where the Ituxy joins the Purús, 692 miles from the Amazon. The plant was constructed by the C. & C. Electric Co., of New York, and is based on the Nernst lamp system. The same company will probably supply a plant for Manacapurú, in the same region. The town of Labrea is also planning to obtain a water works system.

The Indians on the river Japurá have been out on the war path, burning two or three rubber stations and killing some thirty persons.

The Amazon cable is as usual broken, so that business in rubber has been done by fits and starts, depending entirely on the arrival of ships bringing news of exchange rates from Pará.

The greatest present need of the Amazon country is a better, quicker, and cheaper means of steamer communication with the United States.

#### THE CONWAY CONCESSION ON THE ACRE.

EVERYBODY here is talking about the concession by the Bolivian government, of the Acre rubber district, to the

American syndicate, of which THE INDIA RUBBER WORLD has lately published accounts. The river Acre rises in Bolivia—in which country it is called the Aquiry—but enters Brazil before discharging into the Purús, one of the largest tributaries of the Amazon. The highest point on the Acre navigable is 1058 miles distant from the Amazon. The chief towns (they are called "cities") are Floriano Peixoto, on the Brazilian section, and Puerto Acre (or Puerto Alonzo), at the boundary, in Bolivia. At the latter place a Bolivian custom house exists and a fort is being built; a mule road is also being opened to La Paz, the capital of Bolivia. On the Brazilian Acre are rubber stations at Apuhý, Arares, Nazareth, and the state revenue station at Caquetá. On the Bolivian section there are rubber stations at Flor de Ouro and at Bagaro, where Galvez, the head of the late so-called "republic of Acre," fired upon a Brazilian boat.

The dispute at one time between Bolivia and Brazil over the ownership of this territory arose from the trouble in determining the exact source of the river Javary, the division line being specified as running from that point to the mouth of the river Beni. This point having been settled, Peru now bases a claim to a portion of the Acre district, on another imaginary line, and has filed a formal protest against the validity of the concession granted to Sir Martin Conway.

That the Acre district is the richest portion of the Amazon valley there can be no doubt, some of the *sringales* there yielding from 8 to 12 kilograms of fine rubber a day, per *estrada* of 180 trees. [This is equal to 2.3 ounces per tree. Elsewhere in this paper the same writer refers to 1.5 ounces as a good average yield.—THE EDITOR.] The Caucho has been largely worked out on the Brazilian Acre, but doubtless very much still exists on the upper waters of the river.

At present the prices of goods are very high on the Acre, owing to heavy freight rates and the fact that everything must be imported. In 1900 I paid at the rate of \$1 a pound for jerked beef, and everything else in proportion. But a fairly active man could earn \$8 to \$12, gold, a day, at working rubber, and in sixteen days I once made \$1400 cutting Caucho on the Xapury, a branch of the Acre. But the Caucho is gone in that region, and rubber is selling at 50 cents a pound in Manáos and 15 to 20 cents on the Acre.

Several steamers ply between the Acre and Manáos and Pará, at least two a week leaving Manáos for that river at the height of the season. The Acre is somewhat rich in minerals, coal, gold quartz, and tiny emeralds having been found in various parts.

L. G.

Manáos, Brazil, April 14, 1902.

#### "CAOUTCHOUC OIL FOR USE IN BOILERS."

TO THE EDITOR OF THE INDIA RUBBER WORLD: In a certain newspaper in Manchester I have observed a paragraph, credited to your journal, giving particulars of the experiments of a chemist in Hanover, Germany, in relation to "Caoutchouc Oil for Use in Boilers." The story of the Hanover chemist and his experiments is an old one. I myself saw it in print six years ago, and made a note of the fact of its appearance.

I always find that these experiments are very excellent in their way, but their usefulness is spoiled, because no quantities are given. Advice is freely given, but when it comes to recommending the quantity per horsepower, the scientists fail to enlighten the factory owner, just as the Hanover chemist has done with the Caoutchouc oil.

A. W. TRENNERY.

Bristol, England, April 16, 1902.

## ANNUAL MEETING AND DINNER OF THE NEW ENGLAND RUBBER CLUB.

THE Exchange Club, in Boston, offers so many advantages in the way of accessibility, rooms, and service, that, for the third time in its history, the New England Rubber Club chose that as its ideal for the annual meeting and banquet on the evening of May 13. From 6 to 6.30 o'clock there was held in the ample smoking room an informal reception, at the close of which, President Augustus O. Bourn called the members to order for a brief business meeting. The secretary, Mr. Henry C. Pearson, presented the following report, which was accepted:

MR. PRESIDENT AND MEMBERS OF THE NEW ENGLAND RUBBER CLUB: A brief glance at the record of the past year shows that the New England Rubber Club has grown in members, in popularity, and in influence. The total membership to day is 149. We have in twelve months lost by resignation 9, but in the meantime have gained 20 regular and 24 associate members. Three times during the year have we met, fraternized, dined, and been entertained by distinguished speakers. "The Twentieth Century Dinner," the "Midsummer Outing" at the Misery Island Club, and the "Tropical Symposium" were all occasions of much enjoyment. The various committees, Dinner, Entertainment, Sports, etc., have done their work thoroughly and willingly, and deserve the commendation of the whole Club. The amount of work that the Executive Committee has accomplished is large, and always characterized by an absence of burdensome formality. The committees' duties have been made pleasant by the tender of the directors' room at the offices of the Revere Rubber Co., and our fellow member, Mr. Morse, himself a judge of good cigars, always saw to it that we were well supplied.

The Club to-day is an institution known in all of the rubber centers, and spoken of as an instance of the wisdom and breadth of view of the New England rubber trade.

During the year that is before us it is to be hoped that this organization will continue to grow in strength and influence, and that it will be deemed advisable to secure permanent quarters for it, as a meeting place for the trade, for visitors, and for the creation of a library of rubber literature. Respectfully submitted, HENRY C. PEARSON, Secretary.

The annual report of the treasurer, Mr. George P. Whitmore, was also read and accepted, embracing the following statement:

## RECEIPTS.

Bank balance April 15, 1901.....	\$ 633.44	
From members for initiation.....	70.00	
From members for dues.....	985.39	
From members for dinners.....	588.75	\$2,277.58

## DISBURSEMENTS.

Dinners, etc.....	\$1,163.19	
Flowers.....	60.00	
Printing, postage, etc.....	121.82	
Members for over-paid dues.....	20.00	1,365.01

Bank balance and cash on hand April 21, 1902. \$ 912.57

The treasurer's report was accompanied by the following statement of the auditing committee:

We hereby certify that we have carefully examined the books of account of the treasurer of the New England Rubber Club, with the vouchers produced, for the period starting April 15, 1901—the date of his last report—and that the statement as rendered by the treasurer (copy annexed) is true and correct, as disclosed by said books as of April 21, 1902.

GEORGE P. EUSTIS, }  
J. FRANK DUNBAR, } Auditors.

The next business before the meeting was a brief amendment to the constitution, which read as follows:

As a mark of especial respect, an honorary president and one or more

honorary vice presidents may be elected at any regular or special meeting, by yea and nay vote.

This was unanimously adopted. The Hon. Elisha S. Converse was then elected honorary president, and the following were elected honorary vice presidents: George A. Alden, James Bennett Forsyth, George H. Hood, Robert D. Evans.

The Club then proceeded to ballot for officers for the ensuing year and elected:

President—AUGUSTUS O. BOURN.

Vice President—LEWIS D. AFSLEY.

Treasurer—GEORGE P. WHITMORE.

Secretary—HENRY C. PEARSON.

Assistant Secretary—WILLIAM H. GLEASON.

Directors—Costello C. Converse, Joseph Davol, Allen L. Comstock, Walter S. Ballou, John H. Flint, George H. Forsyth.

## THE BANQUET.

THE banquet which followed the business meeting was served in the ample dining hall of the Club, where covers had been laid for over a hundred guests. The tables were tastefully decorated with flowers, and in an alcove, screened from the diners by a small forest of palms and tropical plants, an orchestra discoursed excellent music. The menu was excellent and served in the best of style.

MENU		
	Little Neck Clams	
	HORS D'OEUVRES	
Radishes	Olives	Salted Peanuts
	SOUP	
	Mock Turtle, clear, aux quenelles	
	Consomme, Magenta	
	FISH	
	Boiled Salmon, Sauce Musseline	
Cucumbers		Potatoes
	RELEVÉ	
	Saddle of Mutton, Currant Jelly	
Vegetable Printaniere		Potatoes, Duchesse
	Asparagus, Sauce Hollandaise	
	PUNCH	
	GAME	
	Broiled Squabs on Toast	Pomme, Paille
Salad		
	DESSERT	
	Strawberry Frozen Pudding	
	Cakes	
Cheese		Coffee

When at length the coffee was served and the smoke of the perfectos began to circle toward the ceiling, Governor A. O. Bourn, the president, rose and gracefully thanked the Club for the honor it had paid him in again electing him to the office. He also warmly commended the creation of the office of honorary president and honorary vice presidents, and said that in filling those offices as they had, the Club members had done a graceful and worthy act. He then paid a brief friendly tribute to the new honorary officers individually, and at the close introduced the Hon. Arthur H. Wellman, of Malden, as the first speaker.

Although a young man, Mr. Wellman has long known Mr. Converse, and in the very eloquent speech that followed he did ample justice to the character and attainments of the "Grand Old Man" of the rubber trade.

At the close of his speech, which was applauded to the echo, Mr. T. E. Stuttonson gave a five minutes' monologue which was so full of fun and good stories that the rafters rang with laughter.



The next speaker was Henry M. Rogers, Esq., of Boston. Mr. Rogers, an attorney, as president of the Century and Tavern clubs, and as a personal friend of most of those present, was well equipped to interest the audience. His speech was a message to the young men present and was full of eloquence and dramatic power.

Mr. Stanley Nichols followed with a few stories in Irish dialect and a song that brought an enthusiastic encore.

Mr. James Acton, editor and proprietor of the *Canadian Shoe and Leather Journal*, of Toronto, was the next speaker, and caught the attention of the audience instantly by remarking that "Canadians might be slow, but that they did not walk backwards to keep their trousers from bagging at the knees." His speech was full of good feeling, humor, and common sense, and made a decided hit.

Mr. W. B. C. Fox, a humorist of more than local fame, and who by the way is a graduate from the rubber trade, was next introduced, and, together with Mr. Stanley Nichols, gave a series of duets that amused the guests. The staidest members of the Club laughed till they cried.

Mr. Elliott M. Henderson, treasurer of the Manhattan Rubber Manufacturing Co. (New York), then told briefly of a recent trip to Nicaragua, and of the many incidents that made travel in that country pleasant and otherwise.

He was followed by Mr. J. Jackson Todd, president of the Chicago-Bolivian Rubber Co., a graceful and cultured speaker, who beautifully described the journey from the Pacific coast over the lofty Andes and down to the tropical plains where the rubber tree flourishes.

During the evening the following verses were read, causing much amusement:

#### THE RUBBER KING.

A MAN looked o'er the rubber trade  
With eager longing squint.  
"I'll be their King," he firmly said;  
"Sure as my name is Flint."  
  
"I'll weld them into one big firm  
And handle all their gold,  
And every pound of rubber bought,  
By me it shall be sold."  
  
So he began a trust to build,  
And then another trust;  
Some he invited with a smile,  
To some, he said, "You must."  
  
But as the old firms joined his ranks,  
New ones began to sprout,  
'Till when he thought his job was done  
There were less in than out.  
  
So then he formed a monster firm  
With millions in its hands.  
To corner every pound of gum  
In all the rubber lands.  
  
He bought, and bought, and bought again,  
And borrowed as he bought,  
Until he found the world's supply  
Was larger than he thought.  
  
Yet still he bought, to keep the price  
From dropping out of sight,  
And always told the rubber men  
He had the market tight.  
  
Then came a sudden rending crash;  
The King, Oh, where was he?  
A Wall street echo faint replies,  
"The King is O. U. T."  
  
The King is not a penitent;  
Remorse he has not seen;  
Of sorrow he has not a bit,  
Yet his regret is Keene.

In addition to the guests of the Club there were present as guests of the individual members: Mr. B. G. Work, vice-president of The B. F. Goodrich Co. (Akron, Ohio); Mr. E. Lawrence Barnard, of S. D. Warren & Co. (Boston); Messrs. F. F. Schaffer, of Naugatuck, Conn., Charles A. Emerson, C. E. Wardbrook, John S. Patterson, S. W. Bourn, A. O. Bourn, Jr., J. B. Henderson, H. C. Johnson, W. H. Chase, Henry J. Doughty, Rufus Pendleton, A. P. Spear, W. E. Piper, E. H. Cutler, W. H. Mayo, Ernest Jacoby, E. C. Murphy, G. L. Richards, C. A. Richmond, W. H. Palmer, G. H. Stedman, E. C. W. Bliss, George Bassett, William Williman, and F. C. Lowthorp.

#### STANDING COMMITTEES.

THE following appointments have been made by the executive committee, composed of all the officers and directors of the Club:

*Entertainment Committee*—H. C. Pearson, William F. Mayo, E. S. Williams, Theodore S. Bassett, William J. Cable.

*Dinner Committee*—F. H. Jones, G. P. Whitmore, Walter M. Farwell, J. H. Stedman, Charles H. Arnold.

*Resolutions Committee*—Arthur W. Stedman, Eugene H. Clapp, George P. Whitmore.

*Auditing Committee*—George P. Eustis, J. Frank Dunbar.

#### RUBBER TIRES FORTY-SIX YEARS AGO.

IN connection with a communication from Mr. Henry W. Kellogg, in the last *INDIA RUBBER WORLD*, regarding his suggestion of a rubber tire as early as 1856, it may be mentioned that in 1856 two Boston mechanics designed a set of rubber tires, which were manufactured by the Boston Belting Co., and used for some time on a buggy in and around Boston. These men were George Souther and George H. Miller. The first tires made were so soft that they used to fly out of the channel when driven



fast, and they had another and harder set made, which proved more successful. The tire channel, shaped somewhat like the cut herewith, was about  $\frac{3}{8}$  inch deep on the outside. The rubber tire was about  $\frac{3}{8}$  inch in thickness and was made almost square. The tire was made "snug" and "sprung on" with a rope. The square corners fitted into the socket and the tire was tightly held in place by the pressure. There was about  $\frac{1}{2}$  inch rubber outside the socket. The young inventors were much satisfied with the result of their work, and were about to file an application for a patent, when the chief of police of Cambridge—one Robert Taylor—warned them that the running of such a vehicle was a nuisance, and scared them out of making any further use of it.

#### "THE PRICES OF RUBBER GOODS."

TO THE EDITOR OF THE *INDIA RUBBER WORLD*: I have read your leading editorial in *THE INDIA RUBBER WORLD* for May, entitled "The Prices of Rubber Goods," and wish to express my appreciation of it. You have in a very few words summed up the situation most completely, and I agree with you fully in the position taken. I think it important enough to have copies of this article reproduced and sent to all of our agents and customers the world over, giving, of course, *THE INDIA RUBBER WORLD* credit for it. I have no doubt it will enlighten many concerning the true state of the market for manufactured rubber goods.

Yours respectfully,  
By JAMES BENNETT FORSYTH, General Manager.

Boston, Mass., May 5, 1902.



## THE ACRE RIVER CONCESSION.

IT is possible that very serious international complications may yet have to be settled in connection with the leasing of the territory of the Acre to an Anglo-American syndicate, under the concession the details of which have appeared in THE INDIA RUBBER WORLD. Within three years past there have been in this territory at least two uprisings against the Bolivian government. These were probably instigated by Brazilian settlers in that region, but they were suppressed with the help of the Brazilian government, which, after a long continued dispute, conceded the territory to belong to Bolivia. But now that the concessions arranged for by Sir Martin Conway have been ratified by the Bolivian legislature, Brazil appears disposed to feel that Bolivia has practically given away its territory to a foreign government, and much ill feeling exists in consequence.

The Brazilian congress was opened at Rio de Janeiro on May 3, and President Campos Salles, in his message to that body, called attention to the lease by Bolivia of a vast territory in the Amazon valley to an American syndicate, having powers of internal administration. Brazil, he said, replied to Bolivia's offer to take one-fifth of the syndicate's holding by saying that such territory then leased is still the subject of contention with another nation, which is Peru, and that Bolivia, by the proposed lease, which gives to the lessee the use of a military force, really gives up her sovereign rights, so that, if Brazil were a party to such an arrangement, she would have to meet face to face authorities which she never can and never will acknowledge. This declaration was made to Bolivia in a note dated April 14, the government having simultaneously asked congress to withdraw the treaty of commerce and navigation which had been submitted to its approval.

The *Brazilian Review* (Rio de Janeiro) says: "President Salles has received a telegram from the editor of the *Amazonas* stating that his energetic action in regard to the lease of the river Acre region has aroused much enthusiasm at Manáos, where crowds parade the streets, vigorously cheering the president."

The *South American Journal* (London) says: "The contract gives power to the company to raise arm, equip, and maintain a force of soldiers, police, and armed vessels. And this is the part which has caused the greatest alarm and anger of the Brazilians. The Brazilian government has withdrawn the commercial treaty between Brazil and Bolivia, which was before the senate for approval. The Rio papers say the government intends to prohibit the passage through Brazilian territory, either on the water or lands, of any person belonging to or employed by the company or syndicate."

MR. N. H. WITT, of the long established rubber trading firm of Witt & Co. at Manáos, Brazil, has favored THE INDIA RUBBER WORLD with a statement regarding the sentiment on the Amazon with respect to the Acre concession:

"It is regarded there as an anachronism for a modern republic to put any of its territory under control of a private corporation, and especially one organized under foreign laws, under such conditions as prevailed when the East India Company was chartered by Queen Elizabeth to undertake the work which it carried on for nearly three centuries in India. The natives of that country were a subject race, whereas the people now living in the Acre territory are free men and independent citizens of a republic in the twentieth century. Such men are not apt to submit willingly to the exercise of police powers by the paid agents of a foreign corporation whose presence on the

ground is solely for the purpose of making profits for private shareholders. One reason for the interest of Brazilians in the matter is that many of them feel that the Acre by right belongs to them. The natural configuration of the country indicates it to be a part of Brazil; the waters of the Acre flow through Brazil into the Amazon; and the only practicable outlet of the country is through Brazilian territory. It is true that Brazil consented to a construction of the treaty defining the boundary between her own territory and Bolivia which gave the Acre to the latter. Under the theory that 'might makes right,' Brazil could readily have retained this district, and defended her position on the ground that all the development of this district has been made by Brazilian settlers. There is practically no Bolivian population in this territory, and the citizens there who would come under the control of the Anglo-American syndicate are mostly Brazilians. It is felt in Brazil that the fact that Bolivia has been willing to lease the Acre country is a confession of her inability to administer and develop her own territory. Even if Brazil should not be able legally to resist the use of the Amazon by the agents of the lessees of the Acre, it is certain that many ways could be found by the people along the great stretch of waterways between the Acre and the ocean to make it so uncomfortable for the *cessionnaires* as to discourage their work very greatly."

Mr. Witt is not a citizen of Brazil, but feels that his knowledge of the feeling of the people among whom he lives justifies him in suggesting this as a statement of public opinion on the Amazon.

## RECLAIMED RUBBER IN ENGLAND.

ONE of the outcomes of the high price of Pará rubber [says London *Engineering*] was a more general recognition of the advantages of the African product. Another result—and one, it must be confessed, of not quite so commendable a nature—was to bring into increased use what is known as recovered or reclaimed rubber, a product of varying composition, and in many cases of dubious qualifications as a substitute for new rubber. It has, however, many legitimate uses in low quality goods, and has undoubtedly come to stay. A large amount has of late years come to us from America as a product of old goloshes; but it is somewhat interesting to note that a large works, financed by Americans, has recently been erected in the neighborhood of Liverpool to engage in its manufacture. Of course, there are Englishmen engaged in the business, but the invasion of American capital and American methods is quite a new departure, and one which cannot fail to have an important influence both upon the position of our producers and upon the American exporters.

## ENGLISH GARDEN HOSE MAKING.

GARDEN hose in the United States is usually made in 50 foot lengths; one special kind, however, being made in 400 and 500 foot lengths. The short lengths of hose, according to American practice, are made on iron mandrels. According to the English practice garden hose is made in 60 foot lengths, and on solid rubber mandrels. Of course after a time these mandrels give out from being over cured, and also from constant stretching grow a little smaller in the middle, but they have many advantages. For example, the hose, after being made up can be coiled and cured in French talc. They are also very easily removed, as in drawing them out they stretch a little, which of course, makes the diameter less than when they are in their normal state.

## NEW GOODS AND SPECIALTIES IN RUBBER.

## THE "GOLF" FOUNTAIN SYRINGE.

THE manufacturer is fortunate, not only who can place upon the market now and then a new and useful article, but who can also impart novelty to a staple line of goods. Fountain syringes have been so long in use, and so many manufacturers have essayed improvements in them, that one might think that the limit of change had been reached with regard to them. But the article illustrated herewith is in appearance wholly different from anything offered hitherto, and it is so attractive withal, that it cannot fail to be noticed in any stock of druggists' sundries. Besides, it embodies new features of merit in construction. The "Golf" fountain syringe is particularly adapted to the use of travelers or wherever economy of space and convenience is desired. Attached to the bag by a specially patented device, is a waterproof pouch or wrapper of the same ornamental appearance as the

bag, into which, after use, the syringe may be rolled up, the rubber tubing wound around it, and the roll thus made slipped into the pocket or carried in a satchel without taking up any appreciable space. It entirely does away with the clumsy old style box, and there is nothing about its shape or appearance to indicate its contents. The hard rubber pipes are held in place on the face of the bag by a patented device which prevents them from being lost, and by which they are always at hand. The rubber tubing is made flat, except at the ends, so that it may be coiled up without kinking, as the old style will do, and at the same time produce a more copious and rapid flow of water. The bag is made of fine fabric of a beautiful golf pattern—hence the name—coated on the inside with pure black rubber, the seams and neck thoroughly reinforced, and combining elegant appearance with great strength and durability. [Parker, Stearns & Sutton, New York.]

## COWEN STEAM HOSE.

THE inside of this article is similar to a regular high grade steam hose, and added to this is a heavy seamless, closely woven, cotton jacket, which more than doubles the strength of the hose. It will stand 1000 pounds water pressure, and give a long service under high pressure. As a protection to the

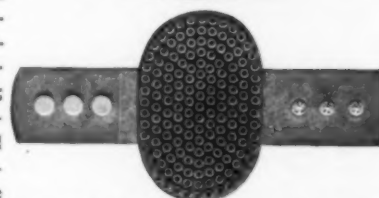


hose, a waterproof woven jacket is superior under many conditions to either wire or marline, as wire becomes bent and the marline, if a single strand is cut, has a tendency to unwind. The heavy woven jacket is impervious to water, oil, or acid, and a desirable protection against chaffing, cutting, jamming, or other

damage. In addition to the steam hose, an air drill hose and a water hose are made under the "Cowen" brands. [Boston Woven Hose and Rubber Co., Boston, Massachusetts.]

## HOLLOW TOOTH RUBBER BRUSHES.

TWO of the illustrations herewith relate to the "Vita" bath, flesh, and massage rubber brush, the object of the illustrations being to show the different applications which may be made of this article. The "Vita" brush is constructed for durability and effectiveness; it is entirely flexible, with handle straps of one piece with the brush, adjustable to fit any size hand, firm and snug as the hand itself. It is also provided with an extension strap for use in treating parts of the body difficult to reach with the brush in one hand. The flat ended hollow fingers provide a working surface of velvety softness and resiliency; their action is cleansing, stimulating, and developing, by friction and suction. The



"Vita" brush is furnished in black or red rubber. The black brush is recommended for use in hospitals and sanitariums, as it may be quickly sterilized by boiling. One of the illustrations shows the "Military" rubber horse brush, made on the same principle, for use in cleaning, shedding, and massage. The retail price of each of these brushes is \$1. [The Flexible Rubber Goods Co., Winsted, Connecticut.]

## BICYCLE TIRE PLUGGING PLIER.

IN bicycle tire repair work the best tools are needed to secure good results, and in this connection may be mentioned a steel plier specially made for the insertion of repair plugs. The illustration gives an excellent idea of the shape of such a plier, which is made 5½ inches long, in black finish, polished, or nickel plated. [Utica Drop Forge and Tool Co., No. 296 Broadway, New York.]



## LOCKE CARTON FOR RUBBER SHOES.

THIS article, a patent on which has been applied for, is described by the inventor as "a shoe box without a cover." When open, it appears as a box separated by a partition to

prevent the two shoes of a pair from rubbing together. It is closed by bringing the two sections together, so that each serves as a cover to the other, making a compact and neat carton, and is held closed by a simple fastening device. It is, of course, equally available for other shoes than rubbers. [Locke Patent Carton Co., No. 9 Otis street, Boston.]

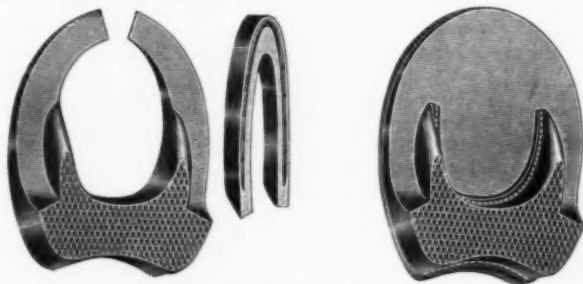
#### THE FOSTER RUBBER HEEL.

THE novel feature of this heel, which is designed to prevent slipping and to increase its durability, is a circular roll of heavy duck, inserted in the surface near the back of the heel, where all the wear comes, and extending nearly through. The special advantage of the duck insertion is that it adheres to any slippery substance, such as ice, wet side walks, smooth iron, and the like. Besides, the cotton plug makes the heel a little firmer, doing away with the "sneaky" feeling when walking. This

heel does not serve to carry mud into the house or office, as is the case with some rubber heels made with cavities or holes to prevent slipping. These heels are slightly concave on the side next to the leather of the shoe, to make them stick better. The same firm also market rubber soles. [Foster Rubber Co., No. 429 Albany building, Boston, Massachusetts.]

#### THE DRYDEN HOOF PADS.

THE "Dryden" pad is an open, and therefore a sanitary, pad. It has a four ply canvas back, and, being flexible, is easily fitted without trimming. It is a very neat appearing pad. The same manufacturers make the "Buckeye" pad, which is of the



closed type. The back is made of oak tanned leather, stitched across the heel of the pad, and cemented with a special rubber cement. These pads are made with special heavy heels for winter use, or when a toe calk is necessary, or it is advisable to raise the heel to more than the ordinary height. These goods are sold to jobbers and horseshoers only. [The Dryden Hoof Pad Co., No. 433 Wabash avenue, Chicago, Illinois.]

#### BEASLEY ELASTIC TIRE.

THIS tire is constructed on the truss principle, with a view to rendering it strong and durable, while at the same time possessing elasticity in a high degree. The feature of the Beasley tire is the core. This is molded and vulcanized in halves, each half being a complete ring, semicircular in cross section. To form the complete tire these half cores are placed together and covered with an outer casing of canvas and rubber, similar to the usual pneumatic tire cover. But the two core pieces are not vulcanized together, or otherwise united. For

use in light vehicles, the core sections are placed together, so that the trusses coincide, but for heavy automobiles the trusses are made to cross, rendering the tire stiffer. All the wear



comes on the outer casing, which can be made light or heavy, according to the work that is expected of it. The important feature of the Beasley tire is, of course, the fact that it does not depend for its elasticity on compressed air, and while it can be, and doubtless will be, punctured, nothing short of its total destruction will disable it so that it cannot be used "to get home." [Standard Anti-Friction Equipment Co., No. 50 Broadway, New York.]

#### "BU-PLEX-ON."

THIS is a patented massage glove, made of a velvety, fibrous composition, and designed to remove facial blemishes, renders the complexion clean and clear, and the skin smooth and soft. The engraving gives an idea of the construction of the article, which, when folded and clasped, is adjusted to the hand and then applied to the face. It is referred to as a satisfactory article for bath and toilet use by ladies, and desirable for gentlemen's use after shaving. [The Faultless Rubber Co., Akron, Ohio.]



#### "WHALEBONE" PUNCTURE PROOF TIRE.

THE special compound used in this tire is referred to as being exceedingly tough, and therefore more durable for car-



riage and automobile wear than other tire stock. The fabric is also of special construction, protected by patents. These two features combine to protect the tire against punctures. The shape of the tire is another point for which excellence is claimed. Being reinforced on the upper side, the tire is never



cut by the rim, and the tire maintains under all loads the same tread surface. When deflated this tire, it is claimed, will not collapse to the same extent as the ordinary pneumatic tires of circular section, and it is therefore less liable to sustain injury from becoming deflated. The "Whalebone" and other special forms of tires are offered by the American Rubber Works Co., No. 277 Broadway, New York, reference to whose business arrangements was made in THE INDIA RUBBER WORLD of May 1 [page 265.]

#### NEW LASTS IN "BOSTON" GOODS.

THE Boston Rubber Shoe Co. have introduced two new styles of toe, which are not shown in their 1902 catalogue. They are the "Spartan" toe in men's, and the "Sharon" toe in women's, misses', and children's shoes. The "Spartan" is a happy medium between the "Saxon" toe and the "Cadet." It avoids the bulldog swing of the former and the straight lines of the latter. It has a fairly broad toe and a moderate swing at the ball of the foot, and is intended to be worn on a shoe with a medium extension sole. In short, it conforms to the latest lasts in leather shoes, in which the extreme bulldog swing and wide extension sole of a year ago have been greatly modified. The "Sharon" toe is similar to the "Spartan." It is just between the "Avon" toe, intended for the extreme mannish shoes which women affected some time ago, and the "Regent" toe. It fits the leather shoe now so much in vogue among women, which has fair breadth of toe, a moderate swing, and a narrow extension sole.



SPARTAN.



SHARON.

#### UNIVERSAL COTTON JACKET.

THE widespread and growing use of rubber hose for air and steam drill work, and kindred purposes, has led to new demands for hose which shall have extra strength, and likewise



capacity to withstand the wear and tear of being dragged about. Such considerations have led to the introduction of the "Universal" cotton jacket, which is a heavy seamless fabric, woven directly over the rubber hose. The "Universal" cotton jacket is painted, which renders it waterproof. It does not kink or get bent or out of shape, and does not unwind should a single strand be cut. The manufacturers issue a special price list for putting the "Universal" cotton jacket on air, gas, steam, and air and steam drill hose. The word "Universal," used in this connection, has been registered as a trade mark. [Boston Belting Co., Boston and New York.]

**RUBBER EGG SHELLS.**—Grover Hashman, a poultry raiser of Tiffin, Ohio, claims to have made a discovery which may revolutionize the present inconvenient method of shipping eggs. He has invented an egg shell which is elastic and unbreakable. He has done away with lime as diet for hens, and instead feeds them on pulverized rubber mixed with corn meal. This forms a rubber film around each egg, and the sulphur contained in the egg vulcanizes the soft rubber into hardness.—*News-paper.*

### INDIA-RUBBER GOODS IN COMMERCE.

#### EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values for the first nine months of the current fiscal year, compared with the same months of three years preceding—not including exports to Hawaii and Porto Rico:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
July-February-March, 1902...	\$401,559 55,444	\$885,561 28,894	\$1,077,189 175,383	\$2,364,309 259,721
Total .....	\$457,003	\$914,455	\$1,252,572	\$2,624,030
1900 01 ..	391,862	641,855	1,273,876	2,307,593
1899 00 ....	397,679	311,973	1,016,612	1,726,264
1898 99 ....	(a)	202,672	1,052,721	1,255,393

(a) Included in "All Other" prior to July 1, 1899.

Pairs of rubber footwear exported during the same periods:

1898-99.	1899-00.	1900-01.	1901-02.
379,116	572,952	1,316,380	2,319,714

#### ITALY.

VALUES of imports and exports of rubber goods, expressed in lire [=19.3 cents.]

	Imports.	Exports.
January-March, 1901.....	3,162,013	2,232,239
January-March, 1902.....	3,952,514	1,943,806

### SOME WANTS OF THE RUBBER TRADE.

[246] FROM a Philadelphia jobbing house: "We should like you to advise us, who manufactures a rubber door bumper, with a rubber ball hanging on a string."

[247] "Will you kindly advise us where we can purchase rubber elastic cord, such as is used in the Whiteley exerciser?"

[248] From a rubber factory: "Kindly advise us where we can purchase a genuine English vermillion."

[249] From a rubber factory: "Can you inform us where to buy the whistles used in rubber dolls and toys?"

#### ANSWERS.

[239] SAYEN & SCHULTZ (No. 21 North Thirteenth street, Philadelphia) advise us that they are prepared to furnish silk covered rubber tubings for compressed air apparatus.

[240] Tyer Rubber Co. (Andover, Massachusetts) mention that they are in a position to supply spread rubber street, cut in strips.—C. Roberts Rubber Co. (Newark, N. J.) write that if what is wanted is fine cut sheet—of which insulated wire manufacturers use considerable—they can supply it.

[242] J. W. Buckley Rubber Co. (No. 69 Warren street, New York) state that they can supply machines for winding flat wire on hose.

[243] George Borgfeldt & Co. (Third and Wooster streets, New York) refer to their Hanover department as prepared to furnish rubber mending tissue.

THE JEFFREY MANUFACTURING Co. (Columbus, Ohio) issue a very complete catalogue of their "Century" rubber belt conveyor and elevating and conveying machinery. Reference is made to the good quality of the rubber belting used, besides which use is made of Gandy and cotton and leather belting. The "Century" belting carriers are peculiar to the Jeffrey system. The catalogue contains cuts showing their system in use in conveying ore, broken stone, sand, and gravel, and in chemical works, a carpet store, and in handling packages generally. [6"X9". 32 pages.]



## JAPAN'S CONSUMPTION OF RUBBER.

A LONDON subscriber to THE INDIA RUBBER WORLD inquires for information regarding the consumption of crude India-rubber in Japan. He says: "I know shipments have gone there, but could not find for what purpose or in what branches of trade it is used." There are two rubber factories at Tokio, exclusive of some small insulated wire plants, one of which dates back nearly twenty years and now employs 225 hands, with a capital equal to \$250,000. Rubber is imported from Java, Sumatra, Borneo, and Saigon. The manager at one time informed THE INDIA RUBBER WORLD that their Para rubber was imported from New York, on account of more favorable freight charges than from any other port. The figures in the margin show the quantities officially stated to have been exported from the United States during the past nine fiscal years. The British official trade returns fail to specify the destination of exports of rubber except to the more important consuming countries, and therefore do not embrace the shipments, if any, to Japan.

	POUNDS.
1892-93.....	900
1893-94.....	1,932
1894-95.....	3,381
1895-96.....	7,590
1896-97.....	8,820
1897-98.....	8,352
1898-99.....	4,009
1899-00.....	10,756
1900-01.....	10,293

## RECENT RUBBER PATENTS.

## THE UNITED STATES PATENT RECORD.

ISSUED APRIL 1, 1902.

- NO. 696,423. Process of devulcanizing India-rubber. Oscar F. Duwez, Enghien, Belgium.
- 696,450. Horseshoe. William L. King, Ottumwa, Iowa.
- 696,490. Metal and rubber horseshoe. Amos Riehl, Akron, Ohio, assignor of one-third to Walter Predmore, Akron.
- 696,538. Catamenial bandage. Heinrich Bauer, New York city.
- 696,688. Rubber tired wheel. Richard Mulholland, Dunkirk, N. Y.
- 696,728. Syringe. Richard H. Eddy, Providence, Rhode Island.
- 696,746. Vehicle tire. Charles A. Pettie, Brooklyn, New York.
- 696,771. Rubber tire for vehicle wheels. John M. Sweet, Batavia, New York, assignor of one-half to Frank Richardson, Batavia.
- 696,875. Bicycle tire. Robert L. Lewis, San Francisco, California.
- 696,879. Playing ball. Francis H. Richards, Hartford, Connecticut, assignor to the Kempshall Manufacturing Co.
- 696,886. Manufacture of golf balls. Eleazer Kempshall, Boston, assignor to the Kempshall Manufacturing Co.
- 696,887. Golf ball. *Same.*
- 696,888. Process of making golf balls. *Same.*
- 696,889. Golf ball. *Same.*
- 696,890. Golf ball. *Same.*
- 696,891. Golf ball. *Same.*
- 696,892. Golf ball. *Same.*
- 696,893. Golf ball. *Same.*
- 696,894. Golf ball. *Same.*
- 696,895. Golf ball. *Same.*

ISSUED APRIL 8, 1902.

- 696,992. Hollow seamless rubber article. Thomas W. Miller, Akron, Ohio.
- 697,033. Vehicle tire. Charles Stein, Meadville, Pennsylvania, assignor to the Stein Double Cushion Tire Co., Akron, Ohio.
- 697,055. Inner rubber tube for pneumatic tires. Frank A. Wilcox, Erie, Pennsylvania.
- 697,056. Rubber tire setting machine. John K. Williams, Akron, Ohio.
- 697,135. Antislipping device. David M. Dearing, Jackson, Michigan, assignor of one-half to Henry W. Scott, Jackson.
- 697,172. Horseshoe. John Riley, New York city.
- 697,217. Machine for working rubber. John H. Pearce, New Haven, Connecticut, assignor to Henry Stuart Hotchkiss, New Haven.
- 697,227. Inner tube for pneumatic tires. Frank A. Wilcox, Erie, Pennsylvania, and John R. Gammeter, Akron, Ohio, assignors to Pennsylvania Rubber Co.

- 697,338. Process of utilizing waste rubber scrap. Thomas Harmer, Burlington, New Jersey, assignor to the Manufactured Rubber Co., Philadelphia.
- 697,362. Life preserver. Honoré Prevost, Montreal, assignor to Henry Aylmer, Sherbrooke, Canada.
- 697,412. Syringe nozzle. Robert L. McMurrin, Portsmouth, Virginia, assignor of one-third to Robert S. Marshall, Portsmouth.
- 697,417. Golf ball. Eleazer Kempshall, Newtown, Massachusetts, assignor to the Kempshall Manufacturing Co.
- 697,418. Golf ball. Eleazer Kempshall, Boston, assignor to the Kempshall Manufacturing Co.
- 697,419. Golf ball. *Same.*
- 697,420. Golf ball. *Same.*
- 697,421. Golf ball. *Same.*
- 697,422. Golf ball. *Same.*
- 697,423. Manufacture of golf balls. *Same.*
- 696,424. Golf ball. *Same.*
- 696,425. Manufacture of golf balls. *Same.*

ISSUED APRIL 15, 1902.

- 697,441. Apparatus for equipping vehicle wheels with tires of rubber or other elastic material. William S. Brooks, Akron, Ohio.
- 697,564. Pneumatic tire. Charles E. Thomas, Tucson, Arizona.
- 697,597. Tire inflater. Henry K. Austin, Reading, Massachusetts.
- 697,621. Pneumatic vehicle tire. Edgeworth Greene, Montclair, New Jersey, assignor by mesne assignments to the American Rubber Works Co.
- 697,626. Rubber vehicle tire. Frank H. Hyde, Toronto, Canada.
- 697,691. Cushion tire. William H. St. John, Brooklyn, New York.
- 697,792. Process of vulcanizing rubber. Augustus O. Bourne, Bristol, Rhode Island.
- 697,816. Golf ball. Cleland Davis, United States navy.
- 697,917. Manufacture of golf balls. Eleazer Kempshall, Boston, assignor to the Kempshall Manufacturing Co.
- 697,918. Golf ball. *Same.*
- 697,919. Golf ball. *Same.*
- 697,920. Golf ball. *Same.*
- 697,921. Golf ball. *Same.*
- 697,922. Golf ball. *Same.*
- 697,923. Golf ball. *Same.*
- 697,924. Golf ball. *Same.*
- 697,925. Billiard ball. *Same.*
- 697,926. Golf ball. Francis H. Richards, Hartford, Connecticut, assignor to the Kempshall Manufacturing Co.
- 697,927. Golf ball. *Same.*
- 697,957. Methods of extracting rubber like gum from greasewood. Albert Y. Werner and Pearis B. Ellis, Carson City, Nevada, assignors, by direct and mesne assignments of one-third to William M. Stewart and Charles J. Kappler, Carson City.

ISSUED APRIL 22, 1902.

- 698,024. Golf ball. Eleazer Kempshall, Boston, assignor to the Kempshall Manufacturing Co.
- 698,115. Mold for the manufacture of cellular cushion tires for wheels of bicycles or other vehicles. Charles Hird, Woonsocket, Rhode Island.
- 698,289. Heel lift for shoes. Jacob J. Jones, New York city.
- 698,346. Hose heel. Albert E. Wood, Meriden, Connecticut.
- 698,401. Golf ball. Eleazer Kempshall, Boston, assignor to the Kempshall Manufacturing Co.
- 698,402. Golf ball. *Same.*

ISSUED APRIL 29, 1902.

- 698,546. Rubber tire setting machine. Joseph G. Burrows, Akron, Ohio, assignor to The Goodyear Tire and Rubber Co.
- 698,511. Syringe. Frederick H. Jones, Wakefield, Massachusetts.
- 698,512. Golf ball. Eleazer Kempshall, Boston, assignor to the Kempshall Manufacturing Co.
- 698,513. Golf ball. *Same.*
- 698,514. Golf ball. *Same.*
- 698,515. Golf ball. *Same.*
- 698,516. Playing ball. *Same.*
- 698,517. Playing ball. *Same.*
- 698,545. Horseshoe. Edgar Odell and Robert Hürner, New York city.

- 698,726. Vehicle tire. William McCausland, New York city.  
 698,861. Combined cushion, water bag, and fountain syringe. John P. Schan, New York city, assignor to Parker, Stearns & Sutton.  
 698,860. Tire. Lionel D. Saxton, Philadelphia, Pennsylvania.  
 698,959. Heel lift for boots or shoes. Jacob J. Jones, New York city.  
 699,083. Puncture healing composition. William O. De Mars, Cleveland, Ohio.  
 699,088. Process of manufacturing golf balls. Eleazer Kempshall, Boston, assignor to the Kempshall Manufacturing Co.  
 699,089. Playing ball. *Same*.  
 699,090. Golf ball. *Same*.  
 699,091. Playing ball. *Same*.  
 699,092. Playing ball. *Same*.  
 699,093. Golf ball. *Same*.  
 699,094. Playing ball. *Same*.  
 699,098. Link belt tire. Thomas M. Bryson, Atlanta, Georgia.  
 699,111. Cushioned heel. John H. Melavin, Cambridge assignor of one-fourth to Charles F. Brown, Reading, Massachusetts.

[NOTE.—Printed copies of specifications of United States patents may be ordered from THE INDIA RUBBER WORLD offices at 10 cents each, postpaid.]

#### THE ENGLISH PATENT RECORD.

##### APPLICATIONS—1902.

- 4,666. Charles Hird, 18, Southampton buildings, Chancery lane, London. Tires for vehicle wheels. [Communication from the United States.] February 24.  
 4,681. Thomas St. John Bagnall, Dublin. Pneumatic tire covers. February 25.  
 4,722. William H. Ostrander and William Tyler Smith, Glasgow. Wheel tires. February 25.  
 4,736. Jonathan Aldous Mays, 75, Chancery lane, London. Pneumatic tires. February 25.  
 4,736. Joseph Gustave Globensky, 111, Hatton garden, London. Improvements in vulcanizers. February 25.  
 4,753. Henry James Doughty, 45, Southampton buildings, Chancery lane, London. Improvements in rubber boots or shoes. [Communication from the United States.] February 25.  
 4,765. Henry James Doughty, 45, Southampton buildings, Chancery lane, London. Improvements in mechanism for manufacturing rubber boots or shoes. [Communication from the United States.] February 25.  
 4,806. Rudolph Fleisher and Matthias Reithmair, 40, Chancery lane, London. Pneumatic tires. February 25.  
 4,876. Louis Paechtnr, 45, Southampton buildings, Chancery lane, London. Improvements in waterproof fabrics. February 26.  
 4,967. Harry Pace, 21, Constantine road, Hampstead, London. Elastic tires for wheels. February 27.  
 4,970. Robert John Newbery, 27, Fitzroy square, London. Repairing of India rubber tires. February 27.  
 5,009. Michael Ring, 19, Southampton buildings, Chancery lane, London. Pneumatic tires for motor cars and other vehicles. February 27.  
 5,012. Martin Diedrich Rucker, 46, Lincoln's Inn Fields, London. Air tubes for pneumatic tires, and apparatus for making same. February 25.  
 5,016. Francois Clement, 27, Chancery lane, London. Valves for pneumatic tires and the like. February 27.  
 5,021. Thomas Henry Wood and John William Hutchinson, 18, Buckingham street, Strand, London. Appliance for attaching India rubber tires to rims of vehicle wheels. February 27.  
 5,056. John Purdy, 83, Wallasey village, Cheshire. Improvement in tire fabrics. February 28.  
 5,145. Joseph Herbert, Nottingham. Pneumatic tires. March 1.  
 5,271. Charles Tyler Manvell, 88, Mitcham lane, Streatham, London. Auxiliary tread for pneumatic tires. March 3.  
 5,291. John Pollock, 55, Chancery lane, London. Improved valve for pneumatic tires. March 3.  
 5,357. Stanislaus Johann von Romocki, 27 Chancery lane, London. Improvements in the devulcanization of India-rubber. March 4.  
 5,399. George Edward Heyl-Dia, Liverpool. Pneumatic tires. March 4.  
 5,535. James Barker, Hollinwood, near Oldham. Elastic tires and rims for wheels. March 6.  
 5,685. Frederick Joseph Laws, 18, Buckingham street, Strand, London. Air tubes for pneumatic tires. March 7.  
 5,695. Charles Samson, 33, Chancery lane, London. Covers for pneumatic tires. March 7.  
 5,803. Bernard Hippolyte Chameroy, Birkbeck Bank Chambers, Chancery lane, London. Improvements in protecting pneumatic tires. March 12.  
 5,829. Arthur Cook, Quinton, near Birmingham. Puncture sealing device for pneumatic tires and air tubes. March 10.  
 5,889. Johann Franz Lohse and Wilhelm Shulze, 27, Chancery lane, London. Supports or rests for rubber tired wheels. March 10.  
 5,937. Thomas Clemmons, 24, Temple row, Birmingham. Pneumatic tires for cycles and vehicles. March 11.  
 6,069-6,070. Edward Henry Seddon, Manchester. Pneumatic tires. March 19.  
 6,269. Henry Edward Owen Godfrey, Acocks green, near Birmingham. Unpuncturable pneumatic tire. March 14.  
 6,341. Wilfrid Maurice Short, 55, Chancery lane, London. Golf balls. March 14.  
 6,344. Joseph Cohn, 5, Hatton garden, London. Injection tube with rubber mouthpiece. March 14.  
 6,455. Patrick Millar Matthew, Glasgow. Improvements in calendering or friction coating fabrics with rubber and apparatus therefor. March 17.  
 6,465. Frank Howard Hyde, 15, Took's court, Chancery lane, London. Vehicle tires. March 17.  
 6,482. Jean Findling, 36, Chancery lane, London. Improvements in waterproof coverings for treads of elastic tires and foot wear inlays. March 17.  
 6,832. Frederick Constine Kinnear, 33, Chancery lane, London. Tires for velocipedes, motors, and other vehicles. March 20.  
 7,021. Edward Henry Seddon, Manchester. Pneumatic tires. March 22.  
 7,061. The Self Sealing Air Chamber Co., Limited, and Alfred Franklin, 7, Staple Inn, London. Air tubes of pneumatic tires. March 22.

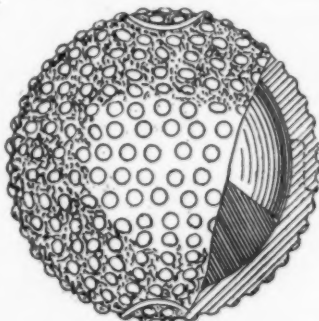
##### PATENTS GRANTED.—APPLICATIONS OF 1900.

- 19,705. Means of repairing pneumatic tire. Hardy, W., Gorleston, Suffolk. November 3, 1901.  
 19,841. Elastic stockings. Lake, H. H., 45, Southampton buildings, Chancery lane, London. [Firm Rossi Berlam, Venice, Italy.] November 5, 1901.  
 20,129. Pneumatic tires. Mays, J. A., 1, Belsize terrace, Hampstead, London. November 8, 1901.  
 20,227. Method of attaching pneumatic tire to rim. Griffiths, W. A., Birmingham. November 10, 1901.  
 20,299. Rubber tire. Wise, W. L., 46, Lincoln's Inn Fields, London. [Paulitschky, R., Wienstrasse, and Wuske, F., 3, Canova-gasse, Vienna.] November 10, 1901.  
 20,360. Cushions or pillows. Hadden, R., 18, Buckingham street, Strand, London. [Meinecke & Co., New York, United States.] November 12, 1901.  
 20,689. Molds for rubber teats. Armstrong, M. D., 25, Hampton road, Forest gate, Essex, and Dowell, J., 88, Bishopsgate street within, London. November 16, 1901.  
 20,707. Exercising apparatus. Ryan, M. B., 12, Erfstrasse, Cologne, Germany. November 16, 1901.  
 20,775. Method of attaching tire to rim. Walster, E., and Walster, J., Epworth, Lincolnshire. Nov. 17, 1901.  
 20,822. Pneumatic tire cover. Westwood, F., Mosely, Birmingham. November 19, 1901.  
 20,846. Pneumatic tire. Pitt, G. W., and Martin, E., Stoke Newington, London. November 19, 1901.  
 20,984. Waterproof garments. Burberry, T., Basingstoke Hampshire. November 20, 1901.  
 21,125. Nonslipping sole for boots and shoes. Hartrick, A. S., Heyfield, Colony of Victoria. November 22, 1901.  
 21,146. Pneumatic tire cover. Rydin, G. A., Achtmeyer, W., and Achtmeyer, C. A., Boras, Sweden. November 23, 1901.  
 21,477. Pneumatic tire. Cooke, J. H., "Ivanhoe," Francis street, Bairnsdale, and Hammond, J. S. H., York street, Sale, Victoria. November 27, 1901.  
 20,500. Puncture locator. Croft, C. J., 12, Stockwell road, Stockwell, Surrey, and Dannell, F. E., 12, Malpas road, Brockley, Kent. November 28, 1901.  
 21,996. Inflating valves. Storz, C. A. G., Frankfort-on-the-Main, Germany. December 4, 1901.  
 22,002. Inflatable horse collars. Schibalski, G., and Schibalski, E., and Kutschea, T., Beuthen, Germany. December 4, 1901.

## THE KEMPSHALL MANUFACTURING CO.'S GOLF BALL PATENTS.

THE company named above is chiefly notable at the present time for the great number of patents it is taking out for golf balls, and processes of manufacturing them. The company was incorporated under the laws of New Jersey, October 9, 1901, with an authorized capital stock of \$200,000, and the principal office of the company being in Arlington, New Jersey. The par value of the stock is \$100

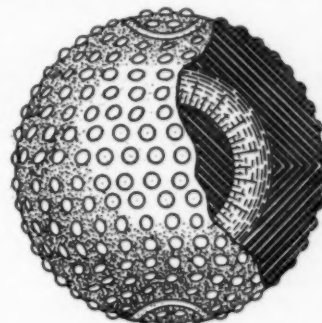
celluloid, the mass of Gutta-percha being theoretically larger before the cover is put on than after. The same principle is applied to a rubber center. Another patent calls for the softening of a Gutta-percha shell upon a filling wholly or partly of soft rubber, thus compressing the rubber until the shell hardens and holds it in place. Another calls for a shell of vulcanized soft rubber, which is expanded by Gutta-percha, injected there-



Compressed Center of Gutta-percha or India rubber, Celluloid Cover. [Patent No. 695,813—E. Kempshall.]



Gutta-percha Center, Expanded Rubber Core, Celluloid Outside. [Patent No. 696,351—F. H. Richards.]



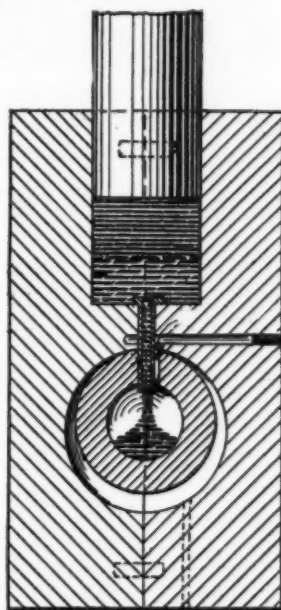
Gutta-percha Center, Expanded India-rubber Interior Cover, Gutta-percha Outside Cover. [Patent No. 696,369—E. Kempshall.]

per share, and the following persons have each subscribed for three shares: Eleazer Kempshall, Boston, Mass.; Charles W. Royce, Newton, Mass.; Henry S. Chapman, Glen Ridge, N. J.; Edward N. Crane, Newark, N. J. Among the other objects of the corporation, is the purchase of the inventions of Eleazer Kempshall in golf balls and kindred articles, and the granting of licenses for their manufacture.

These patents, most of which were issued in March, April, and May, of this year, and assigned to the Kempshall Manufacturing Co., are probably the most pretentious series of India rubber or Gutta-percha patents that have appeared in many years. There are no fewer than fifty-five patents, embracing 656 claims, issued to Mr. Kempshall, together with five patents, embracing 104 claims, issued to Francis H. Richards, of Hartford, Connecticut, and assigned to the Kempshall company, making a total of sixty patents, with 760 claims.

These patents embrace both the process of manufacture and the finished article, and on analysis develop the following salient features:

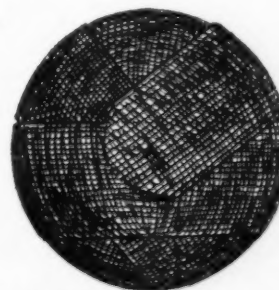
The compression of India-rubber or Gutta-percha as a spherical center of a golf ball, or the expansion of a hollow sphere of rubber or gutta by forcing plastic material within it. These two principles appear in nearly all of both the Kempshall and the Richards patents, with of course an infinite number of variations. One patent, for example, shows a mass of Gutta-percha compressed between two lap joined shell segments of



Mold and Syringe-like Injector for Expanding and Filling Hollow Rubber Balls with Liquid Gutta-percha. [Patent No. 696,351—F. H. Richards.]



Elastic Fabric Center, Celluloid or Gutta-percha Core. [Patent No. 696,883—E. Kempshall.]



Elastic Fabric Center, Wound Under Tension, with Inside of India-rubber Thread Wound Under Tension. [Patent No. 696,888—E. Kempshall.]

in liquid form, and allowed to harden. This same type of ball is also covered with a celluloid shell. Still another has a



Gutta-percha core, an India-rubber envelope, and a Gutta-percha shell. Another is a sphere of vulcanized rubber expanded by liquid gutta with a leather or fabric cover. Still another contains rubber threads wound under tension, covered with strips of elastic webbing wound under tension, and a Gutta-percha or celluloid cover. In certain of the patents, linen thread, rope fiber, strips of Gutta-percha, solid India-rubber bands, and strips of celluloid are all used, and many have celluloid, Gutta-percha, India-rubber, or leather covers.

In reading the patent specifications it is interesting to note that the term "highly vulcanized" rubber is often used, and the manner in which it is spoken of would lead one to believe that it is compounded in the usual manner to get the right weight and rigidity. It is easy to understand how a hollow ball of rubber can be filled with some substance like liquid gutta and expanded. But how a solid ball of rubber, particularly if it is highly vulcanized, can be compressed, is a little more difficult to understand. Speaking off hand one would fancy it would be about as easy to compress a cubic inch of water.

The special virtue claimed for the celluloid cover is that it is smooth, does not chip or fracture holds its color, and that it is dead under a light blow, and lively under a heavy one. It is said the Kempshall Manufacturing Co. are now having these balls made in a rubber factory in New England, the kind being the rubber sphere expanded by liquid gutta and covered with celluloid.

#### EARLIER COMPOSITE GOLF BALL PATENTS.

JUST at this time, when so many golf ball patents are being taken out, it is interesting to pick up bits of history concerning the attempts to secure patents on balls partly of Gutta-percha

and partly of other material. Two illustrations herewith show samples of balls made by James Bennett Forsyth, of Boston, in 1896, the cover being of Gutta-percha and the center being made of vulcanized rubber, cork, wood, and a variety of other materials. This application for patent was not allowed, two patents being cited, one granted to Hillman, October 22, 1895, for a method for molding golf balls, and a British patent to Brend, granted November 14, 1891. The United States patent commissioner said, incidentally, that there is no invention in using heat and pressure to unite the parts of a golf ball. The English patent above cited describes in one claim a golf ball made of celluloid, having an air chamber inside, while in the third claim the interior is made of some material such as cork, asbestos, or other material, covered with celluloid and colored without paint. The celluloid cover is made in halves, one half having a ridge or pins around the face, fitting into a channel or hollows around the face of the other half.



SAMPLE GOLF BALLS MADE BY MR. FORSYTH.

[India-rubber, Wood, Cork, Rubber and Coarse Fiber, and Wood Pulp and Rubber used for Centers.]

## A DECISION AGAINST THE GRANT TIRE PATENT.

THE Grant patent for solid rubber wheel tires has been the subject of another judicial decision, which would appear to be more conclusive than any other which has yet been rendered in regard to it. This is United States patent No. 554,675, issued February 18, 1896, to Arthur W. Grant, and by him assigned to The Rubber Tire Wheel Co., of Springfield, Ohio. This company and others were merged later into the Consolidated Rubber Tire Co., and the article manufactured under this patent has been known as the Kelly-Springfield rubber tire. In the case of The Rubber Tire Wheel Co. v. The Columbia Pneumatic Wagon Wheel Co., in the United States circuit court for the southern district of New York, a decision was rendered December 27, 1898, by Judge Thomas, in which the validity of the Grant patent was sustained.

Later, in the United States circuit court for the northern district of Ohio, suit was brought by The Rubber Tire Wheel Co. against The Goodyear Tire and Rubber Co., alleging infringement of the Grant patent in respect of the "Wing" solid tire manufactured by the defendants. The decision in this case, rendered November 23, 1901, by Judge Wing, sustained the claim as to infringement.

The Goodyear company thereupon signed a *supersedeas* bond for \$100,000, under which they were permitted to manufacture tires as before, pending an appeal. On May 6, last, a decision was rendered in the United States circuit court of appeals in

the sixth circuit, at Cincinnati, Judge Lurton delivering the opinion of the court, the essence of which is the declaration of the patent to be "void for want of patentable novelty," thus rendering unnecessary the consideration of any question of infringement.

"The subject of the controversy," says the court, "is a simple one of solid rubber tires for vehicles. When Grant entered the field as an inventor of rubber tires, he found it occupied by an army of patentees who had preceded him, and no less than eighty prior patents have been put in evidence as anticipations or as illustrations of the history of the art. Grant, in part, seems to recognize the crowded character of the field open to him, for he concludes an account of his construction by claiming that by his mode of construction he has produced 'a rubber tired wheel rim which is capable of more use and which will remain in position better than any other tire which has ever been put upon the market.'"

The first claim of the Grant patent is for a combination of three elements:

*First*.—A metallic channel rim, having angularly projecting flanges, shown as *V* in Fig. 2, forming a channel with inclining sides, into which the rubber fits.

*Second*.—A solid rubber tire having an inner portion adapted to fit in the channel rim and an outer portion forming an angle or corner with the inner portion, the corner being somewhat below the top of the channel seat or metallic rim.

*Third.*—Independent retaining wires passing entirely through the rubber tires horizontally, and located below the outer periphery of the flaring sides of the channel seat. The drawings heretofore set out will better explain these parts, especially if examined in the light of the description of the patent also fully set out.

The decision points out, "first, that it was not new to set solid rubber tires into iron channels with flaring flanges, the widest part of the rubber being below the periphery of the channel sides; second, that it was not new to use solid rubber bands of the 'peculiar shape' of that employed by Grant so far as that shape has any substantial bearing upon the question of novelty here to be considered; and third, that it was not new to use one or two or more wires for the purpose of retaining the rubber tightly in the channel seat.

"The mere bringing together of old parts and allowing each to work out its own old effort without producing some new machine or product is not invention.

"A combination of old elements, to be patentable, 'must produce a different force or effect, or result in the combined forces or processes, from that given by their separate parts. There must be a new result produced by their union; if not, it is only an aggregation of separate elements.'"

After analyzing various claims made regarding the functions of a rubber wheel tire, the decision continues: "Grant has shown great industry in acquiring knowledge of what others had done or taught in the attempt to make a marketable rubber tire wheel, and has shown good judgment in selecting from earlier structures or earlier teachings the best of the devices thus made known, and good judgment in combining them with mechanical skill. But we can discover no trace of invention or original thought, for his parts as combined do substantially the same operations which they did in the combinations from which he took them. He has united the most beneficial features of other patents, and in that sense has made a new combination. But he has not produced a new manufacture or a new result in a patentable sense."

The decision says in one place: "Much of the superiority, or rather superior durability, of Grant's tire is undoubtedly due to the quality of the rubber used, in respect to which there has been in late years a great improvement."

The Rubber Tire Wheel Co. (Springfield, Ohio) were incorporated under the Ohio laws, June 2, 1894, to manufacture solid rubber tires under a patent issued in 1893 to Arthur W. Grant. The original capital was \$10,000, which was gradually

increased to \$45,000. The Grant patent which has been the subject of later litigation was issued in 1896. In April, 1899, the Rubber Tire Wheel Co. were merged, for a consideration reported at \$1,250,000, into the Consolidated Rubber Tire Co., together with several tire selling concerns, the authorized capital of the new corporation being \$10,000,000. At that time THE INDIA RUBBER WORLD was informed by E. S. Kelly, one of the original incorporators of the Springfield company, that, dating from February 1, 1899, contracts were entered into by which the company's orders for rubber would be divided between The B. F. Goodrich Co., the Diamond Rubber Co., The India Rubber Co., and the Hartford Rubber Works Co., said contracts to last during the life of the leading patent. Subsequently, however, the Consolidated company arranged for their own manufacture of rubber, under the name of the Buckeye Rubber Co., since which time a disposition has been apparent on the part of the other rubber companies to enter the trade on their own account, especially since the demand for vehicle tires has become so great.

The B. F. Goodrich Co. inform THE INDIA RUBBER WORLD: "We first commenced to manufacture tires for The Rubber Tire Wheel Co. early in 1894. For some years we were the exclusive manufacturers. Our relations with The Rubber Tire Wheel Co. and their successors, The Consolidated Rubber Tire Co., have always been very close and friendly. Now that the circuit court of appeals has declared the Grant patent void, we propose to market these tires ourselves. We will also market the Firestone side wire tire, which we consider fully equal to the Kelly tire. We will have branches or connections for applying our tires in all the principal cities. Heretofore, we have confined ourselves to manufacturing tires for The Consolidated Rubber Tire Co. Hereafter, however, we will be prepared to manufacture any tires that may be wanted."

The Goodyear Tire and Rubber Co. advise THE INDIA RUBBER WORLD: "This decision in our judgment forever eliminates the Grant patent from consideration in the solid tire business. So far as this company is concerned, it has from the beginning believed that the Grant patent could not stand the final test of a contest upon its merits. The sympathy of the trade has been with us in this fight, and very naturally we shall profit more largely than any of our competitors as the result of this decision. Our solid tire department has been running night and day steadily all through the season and expects so to continue until it is over."

## THE RUBBER PLANTING INTEREST.

THE ninth annual report of the Selangor Planters' Association, in the Federated Malay States, for 1901, states that during the year 247,458 rubber trees, from Pará seed, had been planted by its members, bringing the total acreage up to 7487, which equals 11.7 square miles. The number of trees per acre is not indicated. Of "rambong" (*Ficus elastica*), 34,804 trees were planted on about 700 acres, or an average of about 50 per acre. Trees of this species grow so large that some authorities consider 10 to the acre enough, when full grown. The report indicates that an encouraging view of the rubber prospect exists. The association numbers 68 members, with about 14,661 acres under cultivation, mostly in coffee, the acreage of which is decreasing, on account of declining prices for the product. The high prices obtained for sample lots of rubber sent to London prove to have been most encouraging to the planters.

### BUFFALO AND HONDURAS CO.

[Plantation office, Chemelicon, department of Cortez, Honduras. Head office: No. 2000 Ellicott square, Buffalo, New York.]

INCORPORATED under the laws of New York state; capital, \$400,000. A tract of 1225 acres has been acquired near San Pedro Sula, in northeastern Honduras—on the north bank of the Sula river, and 37 miles from Puerto Cortez, on the gulf, the principal port of the country. It is also convenient to a railroad. The work of clearing has been begun, to prepare for planting rubber and bananas next month. Officers: George H. Dunbar, president; George R. Howard, vice president; Harry Yates, treasurer; F. B. Walker, secretary—all of Buffalo, Messrs. Dunbar and Yates are now on the plantation. The resident manager there is Howard Sawyer Reed, whom the Smithsonian Institution sent to Honduras at one time to make a scientific collection. He favorably impressed the govern-

ment, and was sent as one of its representatives to the Pan American Exposition at Buffalo last year. There he interested several citizens in rubber culture, resulting in the organization of the present company.

#### CONSOLIDATED UBERO PLANTATIONS CO.

[Properties at Ubero, state of Oaxaca, Mexico. Offices: No. 89 State street, Boston, Massachusetts.]

INCORPORATED April 3, under the Maine laws, to deal in real estate and operate plantations; capital, \$2,500,000. The Mexican Coffee and Rubber Co., in 1898, purchased 5000 acres of land near Ubero, portions of which, from time to time, have been sold to rubber and coffee planting companies. The first 1000 acres of land was sold to the Ubero Plantation Co. of Indianapolis, Indiana. The owners of the remaining 4000 acres and of 2000 acres adjoining, have united in forming the new company named above. The parties to the consolidation are the Mexican Coffee and Rubber Co., The Mutual Planters' Co., The Indiana Rubber Co., and Littell & Co., all of Indianapolis; The Ubero Plantation Co. No. 2, of Terre Haute, Indiana, and the Wisconsin Coffee Co., of Milwaukee, together with a number of small planters, some of whom hold not more than 100 acres of land. The Consolidated company thus begins with 6000 acres of cleared land, five established development camps, company's office, plantation house, and store, and a pineapple tannery, together with the various plantings of rubber, coffee, pineapples, etc. William D. Owen, the original purchaser of the lands on which this development work has been done, is chairman of the executive committee of the Consolidated company, and F. L. Torres, general manager of the various Ubero rubber planting companies, will sustain a similar relation to the Consolidated company.

#### PAN AMERICAN PLANTERS' CO.

[Plantation "Santa Isabel," in the state of Oaxaca, Mexico. Office: Nos. 153-155 La Salle street, Chicago, Illinois.]

INCORPORATED in Illinois October 19, 1900; capital, \$50,000. No active work has been done until recently, but the capital is now nearly all subscribed and development is about to begin on a 5000 acre tract between the Colorado and Trinidad rivers, near the confluence forming the San Juan, in Oaxaca. It is also near the Vera Cruz and Pacific railway and twenty miles from San Juan Evangelista, Vera Cruz. A specialty is to be made of rubber planting, for which the land is believed to be well adapted on account of the number of native trees found. Officers: Hon. Charles Foster, late secretary of the treasury of the United States, Fostoria, Ohio, president; James P. Hankey, vice president; Arthur L. Moore, secretary; John A. Wilferth, treasurer—all of Chicago. James Brydon is plantation manager.

#### ISTHMUS PLANTATION ASSOCIATION OF MEXICO.

[“Hacienda del Corte,” district of Juchitan, state of Oaxaca, Mexico. Office: Herman building, Milwaukee, Wisconsin.]

THE camera seems destined to play an important part in the development of plantation enterprises in Mexico. As now managed, the various planting companies draw their capital from innumerable investors, scattered throughout the United States, most of whom contribute but a small amount each. Naturally many people will hesitate to part with their money, to be invested too far away from home for them ever to hope to see the work in progress for which they are paying. But the liberal use of photography has put it in the power of the investors in rubber planting to see every step in development made by their companies. Thus a recent pamphlet issued by the company named above shows thirty-seven photographic views—of lands being cleared, of rubber and coffee nurseries, of transplanted trees in various stages of growth, of buildings

of laborers in their different forms of employment, and so on. It is, altogether, a very interesting publication, and particularly in the suggestion of the utility of the camera for reporting what is being done on one plantation. It is the custom with these planting companies, for the investors to select annually an “inspector” to visit Mexico and report on their interests. We should think it advisable to select always an inspector capable of taking “snap shots” at what he saw, and having his pictures developed for the benefit of the persons who are paying the bills.

#### THE OBISPO RUBBER PLANTATION CO.

[Plantation “El Obispo,” Tuxtepec, state of Oaxaca, Mexico. Offices: Park Row building, New York.]

THE company above named have issued “Book No. 1,” to be one of a series showing from time to time the progress made on their plantation. Here are shown more than fifty photographic views of scenes on the plantation, embracing lands freshly cleared, rubber nurseries, transplanting, wild rubber trees, laborers at work and at rest, plantation buildings, etc. —C. S. Donaldson, of Scottdale, Pennsylvania, who was selected as the first annual inspector, has made a report to his fellow shareholders under date of March 15, 1902. He found 40,000 trees planted, and nurseries containing over 700,000 seedlings; also 100 acres of corn in tassel, being the second crop of corn on the same ground since the clearing of the virgin forest ten months before. He states that about 1500 acres had been cleared at the date of his visit.

#### THE IMPERIAL PLANTATION CO.

[Plantation in the state of Vera Cruz, Mexico. Office: Society for Savings building, Cleveland, Ohio.]

THE president of this company, who is president also of the Mexican Investment and Manufacturing Co., informs THE INDIA RUBBER WORLD that one of the leading rubber manufacturing companies has agreed to take all the rubber that can be produced on their two plantations, now under development, in consideration of the rubber being specially prepared.

#### A QUESTION OF BOOKKEEPING.

TO THE EDITOR OF THE INDIA RUBBER WORLD: If not too much trouble, will you kindly inform me whether a plantation company having its property in Mexico can keep all its accounts in English, or does the Mexican law compel the use of Spanish? Perhaps you can ascertain the common practice of American companies doing business there, and I trust you can favor me on this point, as we do not wish to be tied up to Spanish any further than is absolutely necessary to comply with the law. Very respectfully,

Providence, Rhode Island, May 24, 1902.

ANY company transacting business in Mexico is required by law to keep books, the character of which is specified, and which must be open for inspection by the authorities. They must be kept in the language of the country, with all accounts expressed in the money of the country, besides which each page of such books must have an internal revenue stamp affixed. Mexican plantation companies with headquarters in the United States receive their balance sheets and other accounts expressed in Mexican money, to be converted into gold values at the current rate of exchange.

#### CONAKRY (FRENCH AFRICA).

SOME views of cultivated *Castilleja elastica* rubber plants now growing at the experimental gardens at Conakry, in the *Revue des Cultures Coloniales*, are wonderfully like pictures of the same trees growing in Mexico, but for the presence in the views of African natives. There are illustrations also of the Pará and Ceará rubber trees in the same gardens, where no small interest is manifested in rubber cultivation.



## ANNUAL MEETING OF THE UNITED STATES RUBBER CO.

THE tenth annual meeting of the stockholders of the United States Rubber Co. was held at 12 o'clock M., on May 20, at the registered offices of the company in New Jersey, at New Brunswick. The annual reports of the president and treasurer were presented and accepted, and an election of directors held for the ensuing year. The reports referred to were much more comprehensive than usual, containing information in regard to the condition of the company not before made public, for which reason they are given in full here:

## PRESIDENT'S ANNUAL REPORT.

NEW BRUNSWICK, NEW JERSEY, May 20, 1902.

TO THE STOCKHOLDERS OF THE UNITED STATES RUBBER CO.: It is now ten years since the United States Rubber Co. was chartered under the laws of the state of New Jersey and began operations. At the outset there was acquired a large majority interest in the capital stock of nine of the leading companies manufacturing rubber boots and shoes, thus giving the United States Rubber Co. the control of about one-third of the output of those products in the United States. The following year the Woonsocket Rubber Co. and the Goodyear's India Rubber Glove Manufacturing Co. were added, through the purchase of their capital stock, thereby raising the percentage of output to about one-half of the total. In 1898, by the acquisition of the stock of the Boston Rubber Shoe Co., the largest of the individual companies, the percentage of product of the United States Rubber Co. and of its subsidiary companies was further increased to three-quarters of the total output of rubber boots and shoes in the United States.

Some of the advantages of consolidation which were indicated in the prospectus issued at the formation of the company have been to an extent realized, while others have not. Among those realized may be mentioned:

1. Economies in manufacture resulting from each mill having the benefit of the improved methods of manufacture employed in other mills.
2. Consolidated purchasing of certain materials.
3. Reduction in selling expenses, owing to the large product sold.
4. Better supervision of credits, and consequent reduction of losses by bad debts.

Among the advantages anticipated but as yet not realized are:

1. Advantage in purchase of crude rubber.
2. Distribution of manufacture of different classes of goods in the various mills (the preservation of brands and trade-marks being an obstacle thereto).

COMPETITION.—While the United States Rubber Co. during the ten years of its existence has met with a fair degree of success, it became apparent more than a year ago that prices were maintained at a figure which stimulated competition, and the formation of new companies and investment of new capital. Consequently, in January and February, 1901, your directors determined that it was wise to make a marked reduction in prices, which brought the selling price of the standard grades of goods down to about the cost of manufacture. The result of this reduction has been that the sales have largely increased. For the year ending March 31, 1902, the gross sales of the company were \$45,917,536.84, as against gross sales of \$32,224,216.14 the previous year; and for the year ending March 31, 1902, the net sales (including miscellaneous goods) were \$25,436,150.59, as against \$20,853,633.94 the previous year, being an increase in gross of 42.5 per cent. and in net of 22 per cent.

EXPORTS OF GOODS.—While the exports of rubber footwear are still relatively small, it is gratifying to note that our foreign trade has increased from a total of net sales in 1899 of \$122,322.59, to \$741,737.58 the past year.

FUTURE POLICY.—The regaining of trade through the reduction in prices as above shown has been largely accomplished.

The problem now before us is, how to manufacture and market the large product of goods at a fair margin of profit.

That much is being accomplished, both in the way of economy and of efficiency in the important departments of purchasing, manufacturing, and selling, is evidenced by the following:

CRUDE RUBBER.—While in the past our crude rubber has been purchased largely through importing houses, necessitating the payment to them of commissions, the United States Rubber Co., under arrangements recently inaugurated, imports most of its crude rubber directly under its own letters of credit, thereby saving not only in commissions and otherwise, but also obtaining other advantages as the result of direct importations. As the cost of crude rubber is nearly one-half the total cost of the manufactured product, the new management feels that this subject demands the closest attention, and that owing to the very large consumption of crude rubber by the United States Rubber Co. (amounting to \$9,068,379.11 last year) even greater opportunity exists for obtaining our crude rubber advantageously than has as yet been realized.

CONDITION OF MANUFACTORIES.—The physical condition of the extensive plants of the United States Rubber Co. and its constituent companies has been well maintained, the buildings being in a good state of repair, and the machinery up-to-date and first-class in every respect.

SELLING AGENCIES AND BRANCH STORES.—Selling agencies have been consolidated where it could be done without detriment to trade, and the "Branch Stores" belonging to the company have been incorporated.

AUDITING OF BOOKS.—Your management has arranged for quarterly audits of the books and accounts of the United States Rubber Co. and of its subsidiary companies, by Messrs. Haskins & Sells, certified public accountants.

FINANCIAL MATTERS.—Soon after the organization of the new board of directors of the United States Rubber Co. a year ago, the officers and directors were called upon to adjust a large indebtedness which was then found to be owing the company. This adjustment has been accomplished, and while it has been necessary for one of our subsidiary companies (the Meyer Rubber Co.) to take over securities for a large amount, it is believed that serious loss has been avoided.

FUNDING INDEBTEDNESS.—The management has recently consummated the funding of the entire floating indebtedness of the United States Rubber Co. and of its subsidiary companies, by the issuing of \$12,000,000, five per cent. three year, funding notes, which on April 1, 1902, were sold to the First National Bank and Blair & Co., of New York. These funding notes are secured by notes of the subsidiary companies aggregating \$12,000,000, held by the Morton Trust Co. of New York, as trustee for the holders of the funding notes. The existence of a large floating indebtedness, from the very inception of the United States Rubber Co., has been a menace to a thoroughly economic and independent administration of its affairs, and its funding has placed the company in a stronger and more secure position than ever before.

TREASURER'S REPORTS.—By the treasurer's reports which follow, it has been the intention to give the stockholders much fuller information than has been contained in the reports of past years. The result of the year's business, so far as profit is concerned, is not flattering. But while it is true the operations of the United States Rubber Co. and its subsidiary companies show only a very small net profit, namely: \$119,495.60; and the consolidated property account of the United States Rubber Co. and its subsidiary companies, shows a surplus of but \$42,011.75; and while it is also true that the charging off on property account of items of doubtful value (nearly all of which existed prior to the beginning of the year) shows a deficit of \$1,110,344.15 in the property account of the United States Rubber Co. itself—nevertheless, it can be said that it is believed by the management that everything is now brought down to a rock bottom basis, and that from this time forward the process of building up should go on. The inventories of

manufactured goods and of materials and supplies have all been taken at low valuations.

**METHOD OF SELLING GOODS.**—Your president feels that the policy of the company which has prevailed for some years in the sale of its goods should be broadened to meet present conditions, and he recommends an enlarged policy in the marketing of our great product. Although close economies, and a curtailment of expenses, may without danger be introduced in the purchasing and manufacturing departments, they should be employed with caution in the selling department. For some years our goods have been sold under what is called the "contract system." While this system possesses many advantages, and reduces the labors of the selling department, the company in the opinion of your president has outgrown the system. Its maintenance is also open to the objection of giving undue advantage to competing companies selling directly to the retail trade.

It is therefore recommended that the subject receive the careful consideration of the board of directors in determining the policy of the company that shall prevail another year in the sale of its goods.

**CONCLUSION.**—Much that is preparatory to financial success has been done the past year, and good results should follow. The company is now on a solid foundation with ample working capital, and with the plans for concentration and economies in purchasing and manufacturing, and the broad policy in sales recommended by your management to follow the large volume of business already secured, there is every reason to believe that in the future the business of this company can be made as profitable as the rubber boot and shoe business in the United States has been for the past half century. Respectfully submitted,

SAMUEL P. COLT,  
President.

#### TREASURER'S REPORTS.

##### UNITED STATES RUBBER CO.

INCOME AND PROFIT AND LOSS ACCOUNTS FOR YEAR ENDING MARCH 31, 1902.

Surplus March 31, 1901		\$25,013.01
Income from operating plants and income from investments	\$ 115,802.44	
Commissions on goods sold	\$ 740,403.05	
Total income	\$ 856,205.49	
Less expenses:		
Selling	\$477,553.93	
General	320,271.01	797,824.94
Operating profits	\$ 58,380.55	
Less Interest:		
On borrowed money	\$394,519.36	
Allowed customers	81,969.32	476,488.68
Deficit for period		\$ 418,108.13
Amounts charged off applicable to business prior to March 31, 1901		717,249.03
Deficit to surplus		\$ 1,135,357.16
Deficit per general balance sheet		\$ 1,110,344.15

GENERAL BALANCE SHEET, MARCH 31, 1902.

ASSETS.	
Property, plants, and investments	\$48,645,870.07
Cash	\$ 1,418,972.28
Bills receivable	208,676.72
Accounts receivable	4,710,618.83
Inventory, manufactured goods, and materials	1,137,633.65
Deficit	\$7,475,901.48
Total	\$57,232,015.70
LIABILITIES.	
Capital stock Preferred	\$23,525,500.00
Capital stock, Common	23,666,000.00
Bills payable	\$ 3,345,000.00
Loans payable	2,780,356.48
Accounts payable	419,188.33
Due subsidiary companies	\$ 3,435,197.07
Rebates, etc., not yet due	60,773.82
Total	\$57,232,015.70

##### UNITED STATES RUBBER CO. AND SUBSIDIARY COMPANIES.

CONSOLIDATED INCOME STATEMENT FOR YEAR ENDING MARCH 31, 1902.

Gross sales, boots and shoes	\$45,917,536.84
Less:	
Discounts, rebates, allowances and returns	24,721,107.03
Net sales, boots and shoes	\$21,196,429.81
Miscellaneous net sales	4,239,720.78
Total net sales	\$25,436,150.59
Cost of goods sold	\$23,105,814.70
Manufacturing expenses and taxes	632,670.55
Manufacturing profits	\$1,697,665.34
Selling and general expenses	1,223,196.35
Operating profits	\$474,468.99
Other income	708,126.40
Net profits	\$1,182,595.39
Less:	
Interest on borrowed money	\$620,709.20
Interest on Boston Rubber Shoe Co. debentures	240,000.00
Interest allowed customers	202,390.59
Surplus for period	\$119,495.60

CONSOLIDATED GENERAL BALANCE SHEET, MARCH 31, 1902.

ASSETS.	
Property and plants	\$46,293,839.46
Inventories, manufactured goods, and materials	13,642,883.48
Cash	\$ 3,387,599.25
Bills receivable	500,125.43
Accounts receivable	5,800,936.47
Securities owned	3,333,656.93
Miscellaneous assets	172,195.08
Total assets	\$73,131,236.10
LIABILITIES.	
Capital stock, Preferred	\$23,525,500.00
Capital stock, Common	23,666,000.00
Boston Rubber Shoe Co. debentures	\$47,191,500.00
Fixed surpluses	4,800,000.00
Bills payable	6,939,505.74
Loans payable	\$ 9,892,257.00
Accounts payable	2,829,192.83
Deferred liabilities	1,196,077.96
Reserved for doubtful accounts	13,917,527.79
Surplus	211,339.70
Total liabilities	\$73,131,236.10

JAMES B. FORD,  
Treasurer.

#### THE ANNUAL ELECTION.

FIFTEEN directors were elected—the same number as last year—though the by laws since 1899 have provided for nineteen directors. During the year four vacancies had occurred in the board, by death and resignation, which had been filled by the remaining directors. The board as it existed just prior to the annual meeting was reflected without change. There had been some expectation of a contest for control, owing to the fact that the firm of Talbot J. Taylor & Co. had sent out requests for proxies. Only one ticket was presented, however, for which 298,912 shares were voted, except that 87,189 additional shares—being those for which the Messrs. Taylor's representatives held proxies—were voted for M. S. Burrill. The board is now constituted as follows, the figures in parenthesis following the names of the directors indicating the number of full terms for which each has been elected to date:

[NOTE.—The positions held by these gentlemen in the various rubber shoe manufacturing companies are indicated in another place.]

ELIAS C. BENEDICT, No. 80 Broad street, New York. [1]

Of E. C. Benedict & Co., brokers.  
Vice President: Indianapolis Gas Co.  
Director: Kern Incandescent Light Co.

MIDDLETON S. BURRILL, No. 49 Wall street, New York. [1]

Of Zabriskie, Burrill & Murray, lawyers.  
Director: Rubber Goods Manufacturing Co.

**SAMUEL P. COLT, Providence, Rhode Island. [11]**

*President:* Bristol County Gas and Electric Co., Industrial Trust Co. of Providence, National Eagle Bank of Bristol, Rhode Island Safe Deposit Co.  
*Vice President:* First National Bank of Bristol.  
*Director:* American Woolen Co., Denver City Tramway Co., Newport Trust Co., Providence Banking Co., Providence Telephone Co.

**ELISHA S. CONVERSE, No. 101 Milk street, Boston, Massachusetts. [5]**

*President:* Malden National Bank.  
*Director:* Exchange National Bank of Boston, Colorado Smelting Co.

**HARRY E. CONVERSE, No. 101 Milk street, Boston, Massachusetts. [5]**

*Director:* Exchange National Bank of Boston, Glenark Knitting Co., Glendale Elastic Fabrics Co., Metropolitan Storage Warehouse Co., Export Lumber Co.  
*Trustee:* Malden Savings Bank.

**COSTELLO C. CONVERSE, Boston, Massachusetts. [2]**

*President:* Revere Rubber Co., Boston and Colorado Smelting Co., Phoenix Furniture Co. (Grand Rapids), Grand Rapids Plaster Co.  
*Vice President:* First National Bank of Malden, Boston Land Co.  
*Director:* National Bank of the Republic, Rubber Manufacturers' Mutual Insurance Co., Grand Rapids Brush Co.  
*Trustee:* Boston Safe Deposit and Trust Co.

**JAMES B. FORD, No. 15 Murray Street, New York. [11]**

*Trustee:* American Bank Note Co.  
*Director:* New York Mutual Gas Light Co., Export Lumber Co.

**J. HOWARD FORD, New York. [11]****FRANCIS L. HINE, No. 2 Wall street, New York. [1]**

*President:* Nashawannuck Manufacturing Co.  
*Vice President:* First National Bank of New York.  
*Treasurer:* Jersey Water Co.  
*Trustee:* Brooklyn Trust Co., South Brooklyn Savings Institution.  
*Director:* Chicago Rock Island and Pacific Railroad, Home Life Insurance Co., Liberty National Bank of New York, New Domestic Sewing Machine Co., Review of Reviews Co.

**HENRY L. HOTCHKISS, New Haven, Conn. [11]****LESTER LELAND, 101 Milk street, Boston, Massachusetts. [4]**

*Director:* Shoe Hardware Co., State National Bank of Boston, Georgetown and Western Railroad, Industrial Mutual Insurance Co.

**FREDERICK C. SAYLES, Providence, Rhode Island. [4]****FREDERICK M. SHEPARD, East Orange, New Jersey. [11]**

*President:* Goodyear Rubber Co., Rubber Clothing Co., Union India Rubber Co., Orange Water Co., East Orange Safe Deposit and Trust Co.  
*Director:* Mutual Benefit Life Insurance Co. of Newark.

**FRANCIS LYNDIE STETSON, No. 15 Broad street, New York. [1]**

Of Stetson, Jennings & Russell, lawyers.  
*Vice President:* Cataract Construction Co.  
*Director:* Alabama Great Southern Railroad Co., Alabama Great Southern Railway Co., Buffalo and Lockport Railway, Buffalo and Niagara Falls Electric Railway, Buffalo, Tonawanda and Niagara Falls Electric Railroad, Buffalo Traction Co., Buffalo Railway, Chicago and Erie Railroad Co., Cincinnati, New Orleans and Texas Pacific Railway, Crosstown Street Railway of Buffalo, Erie Railroad Co., Lockport and Olcott Railway, New York, Susquehanna and Western Railroad Co., Niagara Development Co., Niagara Falls and Suspension Bridge Railway, Niagara Falls, Whirlpool and Northern Railway, Niagara Falls Power Co., Niagara Junction Railway South Carolina and Georgia Railway Co., Southern Railway Co. in Kentucky, Southern Railway in Mississippi, United States Express Co.

**JOHN D. VERMUELE, No. 503 Broadway, New York. [6]**

*President:* Holland Trust Co., York Cliffs Improvement Co.  
*Treasurer:* York Water Co.  
*Director:* Chatham National Bank of New York, Amsterdam Casualty Co., Empire Realty Co., Brigantine Co., Philadelphia and Brigantine Railroad Co.

The first meeting of the newly elected board of directors was held at the office of the company in New York on May 23, and the following officers were elected:

*President*—SAMUEL P. COLT.  
*Vice President*—COSTELLO C. CONVERSE.  
*Second Vice President*—LESTER LELAND.  
*Treasurer*—JAMES B. FORD.  
*Assistant Treasurer*—JOHN J. WATSON, JR.  
*Secretary*—SAMUEL NORRIS, JR.

The Executive Committee consists of Samuel P. Colt, Costello C. Converse, Lester Leland, James B. Ford, and Francis L. Hine.

**SUMMARY OF THE CONSTITUENT COMPANIES.****NEW JERSEY RUBBER SHOE CO.  
NEW BRUNSWICK, NEW JERSEY.**

ORGANIZED and incorporated in New Jersey in 1877; capital, \$200,000. Successive presidents, Lewis L. Hyatt, John R. Ford, and Mahlon C. Martin (elected 1890.) The latter was one of the first to suggest a consolidation of the rubber shoe trade, and the Jersey factory was the first to be acquired by the United States Rubber Co. Its plant and business were bought with the preliminary issue of shares by the United States company, which has since operated the plant in its own name, the New Jersey Rubber Shoe Co. going out of existence in 1892.

**MEYER RUBBER CO.****MILLTOWN, NEW JERSEY.**

ORGANIZED by Christopher Meyer and incorporated in New Jersey in 1858; capital, \$200,000. In 1861 the stock company of Ford & Co. was merged into it. Acquired in 1892 by the United States Rubber Co., for \$1,200,000, John R. Ford being the principal owner. Factory has been idle since March 3, 1897, the "Meyer" brands being manufactured since at the United States company's New Brunswick factory. The Meyer Rubber Co. continues its corporate existence.

**NEW BRUNSWICK RUBBER CO.****NEW BRUNSWICK, NEW JERSEY.**

INCORPORATED in New Jersey, April 18, 1850; capital \$60,000; increased 1881 to \$300,000. Acquired by the United States Rubber Co., 1892. Manufacture consolidated with the Jersey plant in 1894. Name changed to New Brunswick Tire Co. in 1896 and factory devoted to making tires, and later passed from control of the United States company. Now under lease to American Rubber Works Co.

**BOSTON RUBBER CO.****FRANKLIN AND CHELSEA, MASSACHUSETTS.**

ORGANIZED by George H. Hood. Incorporated in Massachusetts, 1878, with a factory at Chelsea. First manufactured wringer rolls and later mackintoshes, carriage cloth, and mold work. In 1888 purchased a factory at Franklin, and began the manufacture of rubber footwear. In 1892, having then \$300,000 capital, was acquired by the United States Rubber Co. Work ceased May 9, 1896. The rubber shoe machinery was sold later to the Boston Rubber Co. of Montreal, Limited, and the last of the material at Chelsea was sold in 1901 to a dealer in second hand machinery.

**THE L. CANDEE & CO.****NEW HAVEN, CONNECTICUT.**

LEVERETT CANDEE was the first to make rubber shoes under the Goodyear patents. He formed a company which was incorporated under Connecticut laws July 21, 1852; capital, \$200,000. Acquired by the United States Rubber Co., 1892, with \$400,000 capital and \$1,500,000 surplus.

**NATIONAL INDIA RUBBER CO.****BRISTOL, RHODE ISLAND.**

INCORPORATED in Rhode Island April 17, 1838, succeeding to the plant and business of the National Rubber Co., incorporated in 1864, which in turn succeed the old Providence Rubber Co., one of the pioneer concerns. In 1887 Colonel Samuel P. Colt became receiver of the National Rubber Co., and the reorganization was effected by him. Acquired by the United States Rubber Co., 1892, with \$1,500,000 capital and more than \$500,000 surplus. The factory produces, in addition to rubber footwear, insulated wire, rubber clothing, and druggists' sundries.

**AMERICAN RUBBER CO.****CAMBRIDGEPORT, MASSACHUSETTS.**

ESTABLISHED by Robert D. Evans in 1873, as a jobbing concern. In 1877, consolidated with the Eagle Rubber Co. and a factory established for rubber clothing, carriage cloth, boots and shoes, and wringer rollers. Incorporated in Massachusetts; capital, \$200,000. Factory burned in December, 1881, and replaced with new building the next year. Acquired by the United States Rubber Co. in 1892, with \$1,000,000 capital and \$1,500,000 surplus, since which time the production has been confined to boots and shoes and mackintoshes.

**GOODYEAR'S METALLIC RUBBER SHOE CO.****NAUGATUCK, CONNECTICUT.**

FOUNDED in 1843 as Samuel J. Lewis & Co.; incorporated under Connecticut laws February 7, 1845, with \$30,000 capital, which has been increased gradually to \$1,000,000. The company were first to introduce "arctics," invented by Thomas C. Wales, and hence became widely known as the Wales-Goodyear Shoe Co. Acquired 1892 by the United States Rubber Co. There are two shoe factories and an extensive rubber reclaiming plant, which has been employed in supplying reclaimed rubber to factories of the United States Rubber Co.



## LYCOMING RUBBER CO.

WILLIAMSPORT, PENNSYLVANIA.

ORGANIZED in 1886; incorporated in Pennsylvania, with an authorized capital of \$500,000. Originally devoted to a general line of rubber goods and changed later to the production of footwear exclusively. Acquired by the United States Rubber Co. in 1892, with its capital rated at \$400,000.

## PARA RUBBER SHOE CO.

SOUTH FRAMINGHAM, MASSACHUSETTS.

ORGANIZED by John N. Stickney; incorporated in Massachusetts in 1891; capital, \$200,000. Manufacturing began August, 1892, when capital was increased to \$500,000; in 1897, increased to \$1,000,000. Employed 1200 hands and made 14,000 pairs of rubbers daily, but failed to pay dividends. Directors voted June 15, 1891, to close factory. Treasurer Stickney died November, 1891. Early in 1892 assets reported not to exceed \$195,000, with large debts. Acquired in 1892 by United States Rubber Co. Plant deeded to the Hickory Wheel Co., July 1, 1893.

## BROOKHAVEN RUBBER COMPANY.

SETUCKET, LONG ISLAND.

INCORPORATED under West Virginia laws, with \$300,000 capital. In June, 1888, succeeded the L. B. Smith Rubber Co., in manufacturing third grade rubber boots and shoes. The United States Rubber Co., at the beginning, in 1892, acquired the stock of Charles R. Flint in the Brookhaven company, and eventually acquired all the shares, which it still holds. Under contract of March 9, 1894, the Brookhaven factory was sold to the North American Rubber Co., with a proviso that it should not manufacture rubber footwear. The old shoe lasts on the premises were destroyed and some other material was sent to the National India Rubber Co.'s factory.

## GOODYEAR'S INDIA RUBBER GLOVE MANUFACTURING CO.

NAUGATUCK, CONNECTICUT.

BUSINESS begun in 1844 by Brazilla Arntz, at Litchfield, Connecticut; removed in 1847 to Naugatuck and incorporated June 9, with \$6000 capital, under the present name, to manufacture rubber gloves, mittens, and finger cots. Later, the manufacture of clothing, boots and shoes, and druggists' sundries was added, and the capital increased to \$500,000.

In 1881 the factory of the Phoenix Rubber Co. was purchased. In April, 1893, "more than a majority of the stock" was acquired by the United States Rubber Co.

## COLCHESTER RUBBER CO.

COLCHESTER, CONNECTICUT.

ORGANIZED in 1888 by George Watkinson. Incorporated April 9, 1888; capital, \$400,000. Operated the plant formerly owned by the Hayward Rubber Co. Transferred to the United States Rubber Co., August, 1893. Work suspended August, 1894. "Colchester" brand retained for some time, the goods being made at Woonsocket. Part of the plant removed to the National factory, at Bristol, R. I.

## RUBBER MANUFACTURERS' SELLING CO.

Organized in 1889 by Mr. Watkinson. Incorporated February 6, 1891; capital, \$300,000. Transferred to the United States Rubber Co. with the Colchester Rubber Co.

## WOONSOCKET RUBBER CO.

WOONSOCKET, RHODE ISLAND.

BUSINESS established November 25, 1864, by Joseph Banigan; incorporated 1867 as the Woonsocket Rubber Co., with \$100,000 capital; began making rubber footwear, October, 1868. Factory for boots erected at Millville, Massachusetts, in 1882; a second factory at Woonsocket—the "Alice" mill—erected in 1889. At the annual meeting, April 24, 1893, it was voted to sell the capital stock of the company—then nominally \$2,000,000—to the United States Rubber Co., to pay for which, and for the Marvel Rubber Co., and the Lawrence Felting Co., there was an issue of \$11,702,800 in new shares.

## MARVEL RUBBER CO.

Incorporated in Rhode Island, October 7, 1892, by Joseph Banigan, Henry J. Doughty, and Patrick J. Wren, to manufacture a molded rubber shoe; capital, \$500,000. Organized February 25, 1893. Occupied original factory of the Woonsocket Rubber Co., and was transferred with that company to the United States Rubber Co., in April, 1893. Factory closed July 18, 1896.

## LAWRENCE FELTING CO.

Factory at Millville, Massachusetts, for making felt linings for rubber boots, acquired by the United States Rubber Co., in 1893, in connection with the Marvel Rubber Co.

## OFFICIAL BOARDS OF THE CONSTITUENT RUBBER COMPANIES.

## AMERICAN RUBBER CO.

[Election, May 3, 1902.]

DIRECTORS: William R. Dupee, Samuel P. Colt, Harry R. Converse, Lester Leland, Costello C. Converse.

President—William R. Dupee.

Treasurer and Clerk—George P. Eustis.

## MEYER RUBBER CO.

[Election, May 14, 1902.]

DIRECTORS: Samuel P. Colt, James Deshler, James B. Ford, J. Howard Ford, Lester Leland.

President—J. Howard Ford.

Treasurer—James B. Ford.

Secretary—Samuel Norris, Jr.

## BOSTON RUBBER SHOE CO.

[Election, May 5, 1902.]

DIRECTORS: Elisha S. Converse, Ephraim L. Corning, Costello C. Converse, Harry E. Converse, Erskine F. Bickford, Lester Leland, Samuel P. Colt.

President—E. S. Converse.

Vice President—C. C. Converse.

Treasurer and General Manager—Lester Leland. Secretary and Assistant General Manager—Fredrick T. Ryder.

## BAY STATE RUBBER CO.

[Election, February 19, 1902.]

DIRECTORS: H. E. Converse, Lester Leland, F. T. Ryder.

President—H. E. Converse.

Treasurer—Lester Leland.

Secretary—F. T. Ryder.

## BOSTON RUBBER CO.

[Election May 5, 1902.]

DIRECTORS: S. Lewis Gillett, George P. Eustis, Samuel P. Colt, Harry E. Converse, Lester Leland.

President—S. Lewis Gillett.

Treasurer and Clerk—George P. Eustis.

## COLCHESTER RUBBER CO.

[Election, 1896.]

DIRECTORS: Samuel P. Colt, Robert D. Evans, Henry T. Bragg, H. M. Sadler, Jr.

President—Samuel P. Colt.

Treasurer—Henry T. Bragg.

## NATIONAL INDIA RUBBER CO.

[Election, May 19, 1902.]

DIRECTORS: Samuel P. Colt, Henry L. Hotchkiss, Charles A. Emerson, William T. C. Wardwell, Frederick T. Ryder.

President and Treasurer—Samuel P. Colt.

Secretary—Walter de F. Brown.

## JOSEPH BANIGAN RUBBER CO.

[Election, April 28, 1902.]

DIRECTORS: Walter S. Ballou, John J. Watson, Jr., Samuel P. Colt, Edward R. Rice, Charles H. Guild.

President and Secretary—Walter S. Ballou.

Treasurer—John J. Watson, Jr.

## LYCOMING RUBBER CO.

[Election, May 19, 1902.]

DIRECTORS: James B. Ford, Lester Leland, Samuel P. Colt, J. A. Beeber, S. N. Williams.

President and Treasurer—S. N. Williams.

Secretary—J. A. Beeber.

## THE L. CANDEE &amp; Co.

[Election, May 16, 1902.]

DIRECTORS: Henry L. Hotchkiss, Samuel P. Colt, James B. Ford, Lester Leland, H. Stuart Hotchkiss.

President—Henry L. Hotchkiss.

Treasurer—Albert C. Coe.

Secretary—H. Stuart Hotchkiss.

## WOONSOCKET RUBBER CO.

[Election, April 28, 1902.]

DIRECTORS: Samuel P. Colt, Frederick C. Sayles, Walter A. Read, John W. Ellis, F. C. Sayles, Jr.

President and General Manager—Samuel P. Colt.

Treasurer—Frederick Cook.

Secretary—Charles H. Guild.

## GOODYEAR'S INDIA RUBBER GLOVE MFG. CO.

[Election, May 19, 1902.]

DIRECTORS: John D. Vermeule, James B. Ford, Samuel P. Colt, C. Van Vliet, Lester Leland.

President—J. D. Vermeule.

Treasurer—C. Van Vliet.

Secretary—F. F. Schaffer.

## GOODYEAR'S METALLIC RUBBER SHOE CO.

[Election, May 19, 1902.]

DIRECTORS: John D. Vermeule, Lester Leland, Samuel P. Colt, James B. Ford, Costello C. Converse.

President—Samuel P. Colt.

Treasurer—Wm. T. Rodenbach.

Assistant Treasurer—A. H. Dayton.

Secretary—Charles T. McCarthy.

tion with the Woonsocket Rubber Co., and since owned and operated by the United States company direct.

Original factory of the Woonsocket Rubber Co., in 1898, converted by the United States company into a knit boot mill, for which purpose was acquired the machinery of the Fern Brook mill, at Yonkers, N. Y., which had been supplying the United States company. This line has now been abandoned.

#### HAMMOND BUCKLE CO.

WATERBURY, CONNECTICUT.

INCORPORATED under Connecticut laws, April 18, 1889; capital, \$20,000. Acquired by the United States Rubber Co., 1893, and factory removed from Rockville to Waterbury, January 1, 1894. Operated by the United States company direct, in making buckles for arctics and the like.

#### BOSTON RUBBER SHOE CO.

MALDEN, MASSACHUSETTS.

(1) EDGEWORTH Rubber Co., incorporated October 11, 1852; capital, \$5,000; dissolved 1872. Factory taken by (2) Malden Manufacturing Co., incorporated May 4, 1853; capital, \$200,000. Elisha S. Converse elected treasurer September 8, 1853. Name changed to (3) Boston Rubber Shoe Co., May 17, 1855. Factory No. 2, Melrose, built 1881. The United States Rubber Co., in October, 1893, issued \$7,625,000 in new shares, which, together with \$1,000,000 paid in cash, were stated to be in payment for the entire capital stock of the Boston Rubber Shoe Co.—the amount then outstanding being \$5,000,000. Prior to the sale of the stock the Boston company issued to its stockholders \$5,000,000 of 6 per cent. ten year gold debenture bonds. The property of the company included the factory of the Malden Last Co.—The Bay State Rubber Co. is a subsidiary corporation, organized under Massachusetts laws, with \$5,000, in connection with the production of the "Bay State" brand of rubbers.

#### JOSEPH BANIGAN RUBBER CO.

OLNEYVILLE, RHODE ISLAND.

INCORPORATED in Rhode Island, November, 1896; capital \$1,000,000. After the death of Mr. Banigan his executors, in settling the estate, in April, 1896 "deemed it wise to sell their holdings in the Joseph Banigan Rubber Co. They sold their stock to Providence parties." Colonel Samuel P. Colt then joined the board. Talbot J. Taylor & Co. (New York) issued a circular to their customers May 19, 1899, reviewing the latest annual report of the United States Rubber Co., in which they said that certain large cash investments, not explained in the report, were "well understood to include the important Banigan plant." The capital was increased lately to \$1,500,000, when Colonel Colt stated that the company was owned solely by the United States Rubber Co.

### THE RUBBER TRADE AT AKRON.

BY OUR RESIDENT CORRESPONDENT.

THE Colonial Tire and Rubber Co., of this city, has been incorporated under the laws of Delaware, with \$20,000 capital, to control the foreign rights under the patents granted to James A. Swinehart for solid rubber vehicle tires held in position by cross wire insertions. The incorporators are Mr. Swinehart, William Byrider, John Byrider, and P. D. Hall. The latter is a wealthy citizen of Akron, who formerly was identified with the Goehring Mirror Manufacturing Co., whose property was bought by the Pittsburgh Plate Glass Co. The Colonial company contemplates the erection of a factory, but for the present their goods will be made by contract. The B. F. Goodrich Co. have secured the rights under the Swinehart patents in England, and the Colonial company for the rest of Europe. Orders for these tires have been received lately from Spain, and also for tires for the ambulances of the French army in Tonquin.

The Goodyear Tire and Rubber Co. on May 19 filed with the secretary of state of Ohio a certificate of increase of capital

to \$1,000,000. The company was incorporated in September, 1898, with \$100,000 capital, which was increased in May, 1899, to \$200,000. General Manager Seiberling informs THE INDIA RUBBER WORLD correspondent that the purpose of the increase is to cover the growth of the company's plant during the past two years, and provide for further extensions. Another large building is to be added in the near future.

The Summit Rubber Co. were incorporated under Ohio laws May 19, with \$25,000 capital, and are constructing a brick building for a factory between Akron and Barberton. The incorporators are R. M. Hollinger, J. D. Hollinger, E. J. Schulz, F. J. Steinert, and Augustus Warner, all of Akron. They are not yet ready to announce the name of the practical rubber man interested.

The Stein Double Cushion Tire Co. have their factory almost completed. Machinery is being placed in position and the company expect to begin operations about June 1, with Jacob Haber as president and manager.

The Alden Rubber Co., at Barberton, have replaced the ordinary factory whistle with chime whistles. The Alden factory is surrounded by green lawns and the new whistles are in keeping with these and the attractive vine covered walls of the building.

The Faultless Rubber Co. are about to begin work on an addition to their factory which will double the present capacity. The new structure will be four stories high, 50x20 feet, built of brick and tile, besides which a boiler house will be erected.

No disposition has yet been made of the property of the Independent Rubber Co., now in the hands of W. E. Snyder as assignee. Betzler & Wilson, owners of the building, will devote that to other purposes, and it is expected that a new stock company may be organized to purchase the idle machinery.

Help is reported scarce at nearly every rubber factory in the city. At most of the shops "help wanted" signs have been posted all spring. "We can get the here-to-day and gone-to-morrow roustabouts, but good men are scarce, and we cannot get enough though we have scoured the city and country," was the way Manager Seiberling, of the Goodyear Tire and Rubber Co., expressed the situation.

L. C. Miles and H. B. Manton, both interested in the Goodyear Tire and Rubber Co., are in Europe and expect to be in London at the time of the coronation.

Jefferson D. Slater, superintendent of the Faultless Rubber Co., has been spending two weeks at his old home in Newton, Kansas, this being his first vacation in ten years.

Many rubber men in Akron are interested in golfing. The Portage Golf Club, of which Mr. C. C. Goodrich, of The B. F. Goodrich Co., is an enthusiastic member, has expended \$1000 this spring to put its links in order.

A new steam launch on the Ohio canal and lakes adjacent to Akron is the *Corsair*, owned by Mr. B. G. Work, vice-president of The B. F. Goodrich Co., and his brother, Frederick W. Work.

MEXICO.—James Maunder writes from San Juan Evangelista, Vera Cruz, to *The India-Rubber Journal* (London): "I know of the disasters which befell some of our people who purchased a going concern—rubber—in this country; there is another concern going to be offered in London pretty soon, but take *Punch's* advice, 'Don't.' There is good wild land here to be had, near rail and river, for from 21 shillings per acre, and lots of money to be made, but the manager should be a man of experience in tropical agriculture."

## MR. FLINT AND THE NEWSPAPERS.

UP to ten years ago the newspapers gave but slight attention to the rubber business. When, on the afternoon of March 30, 1892, a report was wired from Trenton, New Jersey, of the incorporation of the United States Rubber Co., with \$50,000,000 capital, there was scarcely a newspaper man in New York who knew where to hunt for the big "story" suspected to be involved. The signers of the incorporation papers were bankers and others who had no connection with the rubber trade; in the trade itself there was no name recognized generally as representative; and in such rubber stores and offices in the city as the reporters chanced to visit in search of information there really was nothing known about the United States Rubber Co. Hence, the first published accounts of the new "trust" were so mixed with fiction as to be regarded by many rubber men outside the combination as a hoax, concocted to "fill space."

But in time the new company took shape, on a bigger scale than anything before known in "industrials," and editors came to regard it as being of value as a source of news. Reporters were constantly on the lookout for what the "rubber trust" was doing, or about to do, and their work became greatly simplified when a man was found who was really "in the know"—who welcomed the news gatherers, and seldom failed to reward them with a "statement." For years no newspaper seemed able to distinguish between this "trust" and other interests in rubber, and so every inquirer for rubber news went straight to Charles R. Flint; every turn in the "market" or other movement in the trade was recorded with some reference to Mr. Flint; until this name became linked in the public mind with the control of rubber in every stage from the tropical forests to the sale of overshoes in the retail stores.

He was widely described as the "rubber king." If a man in Europe wanted \$1,000,000 to exploit rubber in South America or Africa, he sailed to New York to ask Mr. Flint for it; and the same thing was done by an Italian who found a new rubber yielding shrub in Mexico, and by every discoverer of a new "substitute," or inventor of a rubber tire, or promoter of a new company for planting rubber. Mr. Flint was summoned before state and national legislative committees when they wanted to know about the "rubber trust." When a rubber manufacturer wanted to borrow money, or capital was wanted to start a new factory, the first question asked by the capitalist approached, was how the matter was regarded by the man whom the New York *Press* once named "Charles Rubber Flint."

It was advertising of the most valuable kind, and advertising that was obtained at small cost. In fact, the frequency with which Mr. Flint's name got into print led to the suggestion in the minds of some, that Mr. Flint must have employed a "press agent." But every newspaper man who obtained an interview with that gentleman became, for the time being, his press agent. Had any reporter abused Mr. Flint's confidence, however, that source of information would thereafter have been closed to him. News gathering at best is not easy work, and it is natural that the reporter who is helped in that work should show his appreciation; had Mr. Flint been of a different temperament, nothing of an unpleasant nature might have been written about him, but his name would have appeared less prominently in the reporters' work. By the way, it may be that reportorial access to Mr. Flint's office has been facilitated by the fact that his confidential secretary was formerly a capable New York journalist.

## THE RUBBER FILLED GOLF BALL.

TWO crack amateur golfers, after a recent tournament at Lakewood, New Jersey, expressed themselves in favor of the "Haskell," the new rubber filled ball. Walter J. Travis, who won the championship at Lakewood, said:

"After a trial extending over several days, and under different atmospherical conditions, I became convinced that under calm weather conditions, there was a slight difference of about five yards in favor of the rubber filled ball from the tee. With an iron, a half or three-quarter shot, with the filled ball accomplished the same as a full shot when a Gutta-percha ball was used. With the wind, however, a Gutta-percha ball had the advantage, against it, its rubber rival had the better of the argument."

"Where the filled ball had made itself felt, however, is with the short players, who, before it was introduced, were minnows as compared with whales. With their short, jerky forearm swing, however, the filled ball has worked wonders, so much so that they can almost hold their own on long courses, with the far reaching men of the first rank. The slashing, brilliant long players I don't think gain anything with a filled ball, except that it requires less effort."

Findlay Douglass said that he was using the new ball because he had not played much during the winter, and had not had enough practice to get into his customary swing. "When, however, I am properly limbered up, I am sure that I can drive as far with a Gutta ball as with the new innovation. When one is on his game and full of confidence there is a great charm as well as satisfaction in hitting the ball as hard as one's power will permit. With the Gutta ball one adds several yards to his drive, with the filled ball the difference is trivial. Furthermore, the feel, to say nothing of the sound at the moment of impact, is not to be compared. In my opinion, a naturally long player does not derive any material advantage by using a rubber filled ball."

On the heels of a recent suggestion from THE INDIA RUBBER WORLD's English correspondent that the Haskell golf ball does not appeal to the British, comes the news from London that the first and second places in the amateur championship games were both won by players using Haskell balls.

## RUBBER NOTES FROM EUROPE.

THE death is reported of Robert Wild, works manager of B. Cohen, Newtown Works, a large mackintosh manufacturer at Manchester, England. Mr. Wild had been engaged in the rubber industry for forty-six years, in Great Britain and Germany, besides going at one time to Russia to start the plant of the Moscow Rubber Co. In the latter work he was assisted by his sons—Walter Wild, now works manager of the Liverpool Rubber Co., Limited, and John Wild, now engaged with the Pneumatic Tyre Syndicate, Limited, of Birmingham.

—A cover of fabric and rubber for an air ship 85 feet in diameter, the largest ever made in Germany, is now being manufactured by Franz Clouth, at his rubber works at Cöln-Nippes.

—The Victoria Rubber Co., Limited (Edinburgh, Scotland), declared dividends, for the last business year, of 5 per cent. on the preference and 2½ per cent. on the ordinary shares of their capital stock.

## BRITISH PACIFIC CABLE.

THE new cable steamer *Colonia*, built for the Telegraph Construction and Maintenance Co., Limited, sailed May 8 from England for Vancouver, carrying the cable to be laid in the Pacific from that port to New Zealand.



## NEWS OF THE AMERICAN RUBBER TRADE.

## THE SAFETY INSULATED WIRE AND CABLE CO.

A meeting of the directors held on May 1, the following officers were elected for the ensuing year: Benjamin M. Whitlock, president; Ira W. Henry and Le Roy Clark, Jr., vice presidents; Herbert T. Richards, secretary; Edwin Epstein, treasurer.—A mortgage covering the plant of the Insulated Safety Wire and Cable Co., at Bayonne, New Jersey, and in favor of the Knickerbocker Trust Co. (New York), was filed in the office of the county register at Jersey City on May 5. The amount is \$1,250,000, and the object is to secure the recent issue of bonds in connection with the reorganization of the company.

## GENERAL ELECTRIC CO.'S CABLE PLANT.

THE General Electric Cable Co. (Schenectady, New York) are erecting a new wire and cable plant, to have an area of 180,000 square feet, and a capacity of about double their present plant in this department. The buildings have been so designed that they can be extended, if this should be found necessary in future. The new plant includes a main building of slow burning mill construction, three stories high, 467×90 feet, for use in the manufacture of cables, and covering wires with insulating material. There is also a one story, steel frame, brick filled, self-sustained building, 369×90 feet, for covering cables with compound and lead jacket. There will be several small auxiliary buildings for the manufacture of inflammable compounds and for other work not desirable to be done in the main building. The machinery will all be electrically driven, and it is the company's intention that the plant shall be thoroughly up-to-date and, as far as possible, a model plant.

## COMMERCIAL PACIFIC CABLE CO.

THIS company, on May 10, filed with the secretary of state of New York, a certificate of increase of its capital stock from \$3,000,000 to \$12,000,000. The company was incorporated September 1, 1901, with \$100,000 capital, which was increased soon to \$3,000,000, at which time a contract was awarded for a cable to connect San Francisco and Honolulu. The object of the present increase is to provide capital for the extension of the cable to the Philippine islands.

## A HARTFORD RUBBER WORKS RUMOR.

THE Hartford *Post* has been hearing reports to the effect that not only has Colonel Albert A. Pope obtained a controlling interest in the American Bicycle Co., but that the syndicate through which he has been operating may gain possession of the Hartford Rubber Works. It was Colonel Pope's policy, while manufacturing the "Columbia" bicycles, to produce all the details of the wheels under one management, and it would not be surprising if, upon again becoming the controlling factor in a manufacturing enterprise, he should wish to resume this policy. The Hartford Rubber Works are now owned by the Rubber Goods Manufacturing Co., but that corporation having changed control, it is not impossible that the interests in charge would be willing to dispose of any of its property for which a good offer was made.

## OMAHA ROOFING AND SUPPLY CO.

THIS company has recently been organized to deal in rubber belting and other supply lines, and also to act as distributing agents for the Carey roofing, manufactured by the Philip Carey Manufacturing Co. (Lockland, Ohio). The officers are: L. T. Sunderland, president; C. G. Crombie, vice president; R. E.

Sunderland, secretary; J. A. Sunderland, treasurer. Mr. Crombie was for many years with the W. S. Nott Co., of Minneapolis, and the other members of the firm are all well known in Omaha. Their office and salesrooms are at No. 1208 Farnham street.

## MANHATTAN RUBBER MANUFACTURING CO.'S ANNUAL.

THE annual meeting of the Manhattan Rubber Manufacturing Co. (New York) was held on May 6, the following officers being reelected:

President—FRANK CAZENOVE JONES.  
Vice President—ARTHUR F. TOWNSEND.  
Treasurer—ELLIOT M. HENDERSON.  
Secretary—J. M. FERRIS.

After the meeting the company gave a dinner at the New York Athletic Club, there being present some thirty gentlemen. Prominent among the guests were E. B. Townsend of Boston; A. H. Hardy and John H. Lewis, of South Norwalk, Conn.; W. B. Richards and James Harold Warner, of New York; Alexander Henderson and W. F. Gaston, of Passaic, N. J.; F. B. Henderson, of Chicago; and Richard Kutzleb, of Baltimore. The spread was an old fashioned English dinner, the enormous haunch of roast beef being brought in and special cuts apportioned on choice. The shad was also served on individual planks for each diner. The table was beautifully decorated with flowers, a minstrel troop enlivened the occasion with songs and recitations, and there were speeches, stories, and a good time generally.

## BOSTON RUBBER SHOE CO.

THE annual statement of the condition of this company last filed with the Massachusetts commissioner of corporations bears date May 5, 1902. The details are given below, compared with the figures for the two years preceding:

	ASSETS.		
	1902.	1901.	1900.
Real estate and machinery....	\$ 1,123,078	\$ 1,096,725	\$ 1,104,525
Cash and debts receivable....	1,935,210	1,741,308	1,504,863
* Contract with U. S. Rubber Co.....	4,800,000	4,800,000	5,000,000
Stock in process of manufacture .....	2,959,537	3,260,131	3,667,644
Miscellaneous.....	18,556	84,512	15,000
Total.....	\$10,836,381	\$10,922,476	\$11,292,032
	LIABILITIES.		
	1902.	1901.	1900.
Capital stock.....	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000
Balance, profit and loss .....	1,030,381	982,324	1,193,730
Debenture bonds.....	4,800,000	4,800,000	5,000,000
Undivided surplus.....	.....	140,152	99,302
Total.....	\$10,836,381	\$10,922,476	\$11,292,032

[\* To pay principal and interest of debenture bonds as they may mature or be drawn.]

The shares are held as follows: Erskine F. Bickford, 275; Mrs. J. L. Bickford, 100; Mrs. E. M. Chick, 4663; Elisha S. Converse, 25,740; Mrs. M. D. Converse, 500; Harry E. Converse, 1000; Costello C. Converse, 500; Samuel P. Colt, 200; E. L. Corning, 2500; Lester Leland, 60; Mrs. F. E. Leland, 500; Industrial Trust Co., 8400; total, 50,000.

## HARDWARE COMBINE DOUBTFUL.

IT now appears doubtful whether the plan for a combination in the hardware jobbing trade, to which reference was made in the last INDIA RUBBER WORLD, will be carried out, at least for the present. The plan involved the consolidation of over fifty

firms, under the name of the National Hardware and Metal Co. The news has come from several cities of dissatisfaction, on the part of leading houses which had been named in connection with the movement, with the terms offered, and it is definitely announced that these firms will not be included. The effect of their action has been to delay the organization of the new company, and doubts are expressed whether any combination will take place.

#### CONSOLIDATED RUBBER TIRE CO.

At the annual meeting of the shareholders, at the office of the corporation in New Jersey, on May 5, the number of directors was reduced from eleven to seven. The following board was elected: Isaac L. Rice, Emerson McMillin, Martin Maloney, Samuel W. Ehrich, Stephen Peabody, Alfred R. Pick, and Frederick A. Seaman. Later the following officers were elected:

*President*—ISAAC L. RICE.

*Vice President*—SAMUEL W. EHRLICH.

*Second Vice President*—VAN H. CARTMELL.

*Secretary and Treasurer*—FREDERICK A. SEAMAN.

Edwin S. Kelly, a former member of the board and general manager of the company, had previously retired. On May 5 the company's 4 per cent. debentures were quoted at 27. On May 7, on sales aggregating \$30,000, the price on the "curb market" fell to 16. The decline was attributed to reports of an unfavorable court decision respecting the principal patent held by the company.

#### OTTO G. MAYER & CO. (NEW YORK)—IN LIQUIDATION.

A MEETING of the creditors of Otto G. Mayer & Co., shipping and commission merchants, No. 44 Cedar street, New York, was held May 14 at the office of Macgrane Cox, referee in bankruptcy, at No. 63 Wall street, and W. A. De Long, deputy water commissioner, was elected trustee. Mr. De Long has been liquidating the business for some time past, and has about \$148,000 in his hands which has been realized from the assets. The schedules show liabilities \$643,021 and nominal assets \$439,915.

#### REMOVAL OF THE TRENTON COMPANY'S CHICAGO BRANCH.

THE large and increasing business of the Trenton Rubber Manufacturing Co. at Chicago, has made it necessary for them to seek larger quarters in that city. They have just leased the large store and basement at No. 20 South Canal street, opposite their old location. Their new store is 150x30 feet, and is being fitted up equal to any rubber warehouse in the West. F. B. McIlroy is the western manager, and has been very successful in marketing Trenton goods throughout the West and in Mexico.

#### A RUBBER SHOE DECISION IN CANADA.

AN important and sweeping decision was handed down at Ottawa on May 15, by the supreme court of Canada in the case of The Boston Rubber Shoe Co. v. The Boston Rubber Co. of Montreal, Limited. It will be remembered that in 1896 Charles L. Higgins, of Montreal, purchased the engraved rolls, calendars, etc., formerly used at Franklin, Massachusetts, by the Boston Rubber Co. He and others, after that purchase, became incorporated under the laws of the Dominion under the name of the Boston Rubber Co. of Montreal, Limited, erected a factory at St. Jerome and began to market footwear stamped with their name. The Boston Rubber Shoe Co., through their counsel, Henry W. Williams, Esq., of Boston, and R. V. Sinclair, Esq., of Ottawa, entered a suit in the exchequer court, the opposing counsel being McGoun & England, of Montreal. In this suit they were defeated, but on appealing to the supreme court they scored a most complete victory. The de-

fendants are now forever enjoined from the use of the word "Boston" on rubber footwear of any description, and are assessed the costs of the suit. No damages were granted, because the plaintiffs acknowledged that their Canadian business was not very large. The specific reason was, indeed, not for the collection of damages, but to guard against the future use of the name, in the event that tariff revision should make it possible for Canadian manufacturers to market rubber footwear in the United States.

#### VISIT TO A RUBBER SHOE FACTORY.

THE A. H. Berry Shoe Co. (Portland, Maine) made up a party of sixteen and visited Factory No. 2 of the Boston Rubber Shoe Co., on May 23. They were met at Boston by Messrs. F. T. Ryder, A. F. Solberry, W. J. Wilson, and William Palmer, who escorted them to the "Fells," where they were taken in charge by Col. Frank Locke and Mr. William E. Piper, the superintendent and assistant superintendent, respectively, and shown all over the great factory. A lunch was then served in the Converse "Bungalow," and later Mr. E. S. Converse drove up, took Mr. Berry into his carriage, and treated him to a drive through the parks.

#### NEW YORK STOCK EXCHANGE QUOTATIONS.

##### UNITED STATES Rubber Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Apr. 26	540	18 1/4	17 3/8	420	60	59
Week ending May 3	1,400	18	16 3/4	725	60	58 1/4
Week ending May 10	710	16 1/2	16 1/2	700	59 1/2	58
Week ending May 17	220	16 1/2	16 1/2	360	59 1/2	58
Week ending May 24	2,290	16 1/2	14 1/4	1,020	57 1/4	56 1/2

##### RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Apr. 26	14,320	25 3/8	23 1/2	700	72 3/4	72
Week ending May 3	1,500	24 1/2	22	1,030	72	70 1/4
Week ending May 10	2,265	23	20	300	71	70
Week ending May 17	910	21 1/2	20	760	69 3/8	68
Week ending May 24	1,190	21	19 1/4	....	....	....

#### MORGAN & WRIGHT (CHICAGO).

THE rubber factory of Morgan & Wright opened on May 5 as a thorough "union" shop in all departments, after conferences between representatives of the Federation of Labor and the management of the company. A number of the employés had gone out on strike, owing to questions relating to wages, and 300 men had formed a rubber workers' union. After the decision mentioned above, steps were taken to organize the women employed in the factory into a separate union. Later there was further trouble, growing out of the employment of a number of hands over time. As a result, a new scale of wages has been adopted, providing for an increase of about 7 per cent., a day's work to consist of 10 hours, time and a half to be paid for over time after 6 o'clock, and double time for Sundays and legal holidays.

#### NEW INCORPORATIONS.

KEYSTONE Pneumatic Horse Collar Co. (Philadelphia), April 30, under New Jersey laws; capital, \$200,000. Incorporators: F. R. Hansell, W. L. Wier, William F. Eidell. Office in New Jersey: No. 419 Market street, Camden. The horse collar in which this company is interested is attached to a rigid rim, which keeps it in shape, and is composed of a leather casing and an inner rubber air chamber. It was first exploited in 1899 by the United States Horse Collar Co. (New York), which went into liquidation on the death of F. R. Brooke, its president and manager. Later the American Pneumatic Horse

Collar Co. was incorporated in New Jersey, to control the patents. The Keystone company, mentioned above, has been organized to work under a license from the American company, in Pennsylvania, Maryland, Delaware, and southern New Jersey.

=Chicago Rubber Shoe Co. (Chicago), under Illinois laws, to deal in rubber goods at wholesale; capital, \$25,000, fully paid. The company will continue the business of E. G. Stearns & Co. Edgar G. Stearns is president and treasurer and George J. Gerok, secretary. The additional directors are Homer E. Sawyer and Eben H. Paine, of New York, and H. G. Armstrong, of Chicago—all connected with the United States Rubber Co.

=The Sectional Rubber Tire Co. (Buffalo, New York), May 17, under New York laws, to manufacture and sell tires, automobiles, and bicycles; capital, \$75,000. Directors: Edward P. Aspinwall, George F. Westcott, F. J. Barron, Mary D. Birdsell, and Robert L. Cox.

#### TRADE NEWS NOTES.

THE Diamond Rubber Co. (Akron, Ohio), with \$1,500,000 capital, has been licensed as a foreign corporation to transact business in Illinois, in which state they report \$40,000 capital invested.

=The New York Insulated Wire Co. have removed from the offices so long occupied by them, in Cortlandt street, New York, to No. 114 Liberty street.

=Work is reported brisk at the factory of the Hazelton Boiler Co. (Rutherford, New Jersey). Among the orders lately received is one for three boilers, 450 H. P., from the Carlton Paper Mills (Passaic, N. J.), and for an additional 150 H. P. boiler from the Meriden (Conn.) Electric Light Co. When the last named order is filled the Meriden company will have Hazelton boilers aggregating 600 H. P.

=The Calumet Tire Rubber Co. (Chicago) are running their two factories twenty-four hours a day, and are, at least, three weeks behind in their orders. Mr. Raymond B. Price, the factory manager, has returned from his Mexican trip with his health fully established.

=The Chicago branch of the Home Rubber Co. (Trenton, New Jersey), in charge of Mr. H. L. Davis, has been removed from the Western Union building to No. 17 La Salle street, where more storage space is available, with better shipping facilities.

=The Phillips Insulated Wire Co. are about to begin work on another good sized addition to their plant at Darlington, Rhode Island. The plans call for an extension of the main building. A portion of the addition will be used for the shipping department.

=The employees of the Alden Barber Co. (Barberton, Ohio), have organized a brass band. The employees both of The B. F. Goodrich Co. and the Diamond Rubber Co., at Akron, have bands.

=The Goshen Rubber Co. (Goshen, Indiana), have filed a certificate with the secretary of state, of the increase of their capital stock from \$50,000 to \$100,000.

=The Brockton (Mass.) Rubber Scrap Co. state that such orders as may be intended for them should go hereafter to their Boston representative, W. C. Coleman, No. 170 Summer street.

=The report circulated from Mexico, that the Trenton Rubber Manufacturing Co. (Trenton, New Jersey), was planning to build a branch factory in that country, is denied by the president of the company.

=It is rumored that Mr. John J. McGill will shortly sever his connection with the Canadian Rubber Co. of Montreal, of which concern he has been for many years general manager.

=According to *The Bicycling World* the G. & J. Tire Co. (Indianapolis) are preparing to file suits for alleged infringements of their patents, including proceedings against certain importers of automobiles fitted with foreign made detachable tires which are claimed to infringe the G. & J. rights.

=Werner & Pfeiderer (Saginaw, Michigan), manufacturers of rubber mixing machines, advise THE INDIA RUBBER WORLD that Mr. F. Notz has retired from the position of general manager of their works, being succeeded by Mr. Emil Staehle.

=The Massachusetts Chemical Co., who are quite large manufacturers of rubber specialties in the insulating lines, will remove their Boston offices from No. 200 to No. 170 Summer street.

=The International Rubber Manufacturing Co. (New York) are now operating their plant at Nos. 351-353 East Sixty-first street, which is the factory formerly occupied by the Straus Tire and Rubber Co. Edward Loewenthal is general manager, and the company have an office at Nos. 290-291 West street, New York.

=The Colonial Rubber Goods Co., the closing of whose factory at Franklin, Massachusetts, has been mentioned already, have been petitioned into involuntary bankruptcy, at the instance of three creditors having claims of about \$6000.

=The New Orleans Belt and Terminal Co. have put in place, in their grain elevator at Port Chalmette, La., a rubber conveying belt 30 inches wide, 1024 feet long, and weighing 5200 pounds. It will be used to convey grain from the elevator to the ships, a distance of 1000 feet, and will have a capacity of 13,000 bushels per hour. The belt was made by the Peerless Rubber Manufacturing Co. (New York), who are represented in New Orleans by J. H. Menge & Sons, Limited.

=C. M. Henderson & Co. (Chicago), who retired recently from the shoe manufacturing business, are still jobbing rubbers. They moved on May 1 to Nos. 248-250 Market street, where they carry a complete stock of Woonsocket and Wales-Goodyear goods.

=There has been some reorganization of the office force of the Woonsocket Rubber Co. The payroll bookkeepers at the "Alice" and Millville factories have tendered their resignations, to take effect June 1, and the work on the two payrolls will be consolidated, under Henry A. Follett.

=Referring to the recent volcanic eruptions in the West Indies, the Chicago branch of the Home Rubber Co. advertises; "Had Mount Pelee been properly packed with 'N. B. O.' black sheet packing, everything would have been well with Martinique to-day, as it would not have been burned out, nor could it have been blown out."

=Morse & Rogers, shoe jobbers, Nos. 134-140 Duane street, New York, have purchased from the receivers of the Milltown India Rubber Co. the stock of rubbers on hand at the closing of the Milltown factory. The amount involved in the transaction is reported to be \$108,000.

=The Wales-Goodyear Rubber Shoe Co. made a shipment of rubbers from Naugatuck during the month, on one order from the West, which embraced 5867 cases of goods, and filled eight railway cars.

=The Consumers' Rubber Co. (Cleveland, Ohio), in addition to their store at No. 22 South Water street, have rented the building No. 199 Bank street, to provide for the increase of their business. Extensive repairs have been made to both of these properties and long leases signed for them.

=Chicago jobbers of rubber belting and hose are reported to be doing an exceptionally good business, some of them being a month or more behind in their orders. One house is said to have turned down an order for a \$1800 belt. Stocks of garden hose are very low.



=The United States Waste Rubber Co. (No. 487 North Warren avenue, Brockton, Massachusetts) offer for sale pure unvulcanized rubber scrap from cement waste, and also buy rubber scrap and waste, making a specialty of old wringer rolls.

=The Stoughton Rubber Co. (Stoughton, Massachusetts) have reduced the hours of labor from 59 to 56 per week, but without any change in the scale of wages. Under this system the hands will have Saturday afternoons as half holidays until September 15.

=The factory of the Goodyear Rubber Co. (Middletown, Connecticut), which had been shut down two weeks for inventory and repairs, started May 19 with a full force.

=The Rubber Chemical Co., Limited, advise THE INDIA RUBBER WORLD that in order to facilitate the conduct of their commercial and sales business, they have decided to open offices at Birmingham—in Council Chambers, Colmore Row—as being a much more convenient center than Mitcham for supplying their customers throughout the United Kingdom. They have appointed Mr. B. J. Ebsworth manager of the sales department, at the address above given.

=Mr. A. H. Alden, of the New York Commercial Co., sailed for Europe May 24, on the *Campania*. During his absence Mr. Arthur W. Stedman, of Boston, will be found at his office.

=By decree of the supreme court of New York, Job E. Hedges has been appointed temporary receiver of the assets of the Straus Rubber and Tire Co., Nos. 351-353 East Sixty-first street, on the application of a judgment creditors for \$1394. The company was incorporated March 8, 1901, under New York laws, with \$25,000 capital.

=The Philadelphia Rubber Works appealed from an assessment for a mercantile license as a dealer in that city, on the ground that they had no store or warehouse there, other than their manufacturing plant, and the protest was sustained in the courts.

=The Yatman Rubber Co. have moved their factory from Newark to No. 608 Passaic avenue, Harrison, N. J. The new factory buildings afford them more room and better facilities for the prosecution of their growing business in the manufacture of stationers' sundries and mold work.

=Negotiations have been in progress for the transfer of the rubber shoe plant of the Meyer Rubber Co. (Milltown, New Jersey) to the International Automobile and Vehicle Tire Co., and it is reported that the same have about been completed.

=Colonel John V. Furey, assistant quartermaster general, United States army, at Philadelphia, will open bids on June 6 for a supply of rubber ponchos.

#### PERSONAL MENTION.

At the annual election of officers of The L. Candee & Co. (New Haven, Connecticut), on May 23, Mr. Henry L. Hotchkiss was re-elected president. This will make his thirtieth year of continuous service.

=Early in the month the Hon. E. S. Converse returned to his home at Malden, Massachusetts, his health having been improved by his stay at Lakewood, New Jersey.

=Mr. Charles B. Allen, of the Boston office of the United States Rubber Co., who recently seriously sprained an ankle in Chicago, has been able to resume attention to business.

=Mr. F. Copeman, of the firm of Maclaren & Sons, proprietors of *The India-Rubber Journal*, of London, was a recent visitor to the United States, and favored the offices of THE INDIA RUBBER WORLD with a call.

=Messrs. Frank da Costa and N. H. Witt, of the rubber trade in Pará and Manaus, respectively, were in New York during the past month. Each of them proceeded from here to England.

=Mr. Edwin S. Kelly, lately general manager of the Consolidated Rubber Tire Co., some time ago became the owner of the estate known as "Whitehall," at Yellow Springs, near Springfield, Ohio—which has been an ideal country gentleman's home for more than a half century. It embraces a spacious mansion in the Colonial style of architecture, surrounded by 1100 acres of park and meadow, woods and fields. Modern improvements in the way of buildings, drainage, etc., have made it a model establishment for Mr. Kelly's purpose—the breeding of shorthorns and thoroughbred horses, sheep and hogs. On May 20 was held the first annual sale of Scotch bred shorthorns from the Whitehall herd.

#### OBITUARY.

THE news will be learned with much regret of the death of Mrs. William H. Acken, which occurred May 3, at their residence, No. 29 West Eighty-second street, New York. Funeral services were held at the residence on May 6, and the interment was at Kensico, New York. The floral offerings were many and elaborate, including a large wreath from the store and offices of the New York Rubber Co., of which Mr. Acken is president. Mrs. Acken was Mary S. Letson, born August 15, 1836, the daughter of the late Johnson Letson, of New Brunswick, New Jersey, one of the founders and for many years president of the New Brunswick Rubber Co.

=Frank Plant died May 9, at Los Angeles, California, where he had gone to recover his health. He was born in England in 1840, and in 1867, after living in the United States for a year, he went to Chicago with the Goodyear Rubber Co. After traveling for them several years, he went to San Francisco for the Boston Rubber Co. Since 1894 he had been associated with his son, Frank W. Plant, in the Plant Rubber Co. of Minneapolis, Minnesota, of which company his son is now president and manager.

#### THE TRADE IN RUBBER SCRAP.

W. C. COLEMAN, of Boston, reports [May 26]: "There has been a good demand for all grades of rubber scrap during the past month. Especially have the reclaimers been active, and in consequence old rubber boots and shoes, both foreign and domestic, have found ready sale at dealers' asking price. I reported on April 29 that the market seemed to be gaining strength. This was about the time of the beginning of the present bull movement, and those who claim that the price of old rubber is governed to a certain extent by the advance and decline in the price of crude, have to fall back to that old saying, 'Exception proves the rule.' I myself think that crude and scrap have no bearing on each other, as they are governed by entirely different conditions. It is very difficult to look a great way ahead and prophesy with any degree of certainty as to whether the 'bulls' and the 'bears'—the dealers being the former and the manufacturers the latter—will be successful in their game. The demand at present is caused by the lack of any ready foreigners. Authentically I can state that there are in the neighborhood of from 4000 to 5000 tons of old rubber boots and shoes, either on the water or about to leave Europe for American ports. The majority of these are due to arrive by June 10, which will greatly relieve the situation; in fact the knowledge of this stock coming has had its effect, and shoes are fully  $\frac{1}{4}$  to  $\frac{1}{2}$  of a cent per pound less than they were a week ago. Unless one of the large reclaimers goes into the market I think that the price will decline to the neighborhood of  $7\frac{1}{2}$  cents or thereabouts during June. Hard rubber scrap is another article that is having a very large call just at present. White and solid black, free of fiber, and in fact all lines except bicycle pneumatic tires are moving freely."

## THE BELGIAN CIE. DU LOMAMI.

ABOUT 1200 miles up the Congo river the Lomami, one of its largest tributaries, enters from the south. The population along the Lomami is very dense, but the stream is so far inland—almost in the heart of the continent—that until recently no attempts were made to establish trade relations with the natives. July 5, 1898, the Compagnie du Lomami, with 3,000,000 francs capital, was formed in Brussels, with the aid of a prominent financial group, to establish trading stations, and exchange European goods for rubber and ivory. Six such stations have been built: (1) At Ilambi, the company's chief post, where a dock has been built, and steamers can be re-

paired: (2) Yankwamu; (3) Yahisuli; (4) Yanga; (5) on the Lombo, a tributary of the Lomami—to which point steamers can ascend from the Congo; and (6) Bena-Kamba. Throughout this region rubber vines abound, but before the advent of the Europeans the natives had never gathered any rubber. The natives were at first hostile, and the population of some villages fled at the approach of the whites, but they have begun already to gather rubber in good quantities and are anxious to obtain European wares. The profits of the Cie. du Lomami for the first year amounted to 130,605.88 francs and for the second year—up to June 30, 1900—to 152,558.14 francs. THE INDIA RUBBER WORLD reported last year the arrival at Antwerp of 92 tons of rubber consigned by this company.

## REVIEW OF THE CRUDE RUBBER MARKET.

THE market has been without special feature during the month, manufacturers continuing cautious buyers, but the tone is steady and importers are not disposed to grant concessions. Pará grades, both old and new, have sold in moderate lots at steady figures, and cable news from Pará indicates a firm market. Central American grades continue to be taken up as fast as they come in, at full prices, but Africans are dull. The rubber factories generally have been active. Receipts at Pará for the crop year have exceeded last year's figures to date by 2000 tons or more.

New York quotations on May 29 were:

PARÁ.		AFRICAN.	
Islands, fine, new....70	@71	Tongues.....43	@44
Islands, fine, old....72	@73	Sierra Leone, 1st quality...60	@61
Upriver, fine, new....71	@72	Benguella.....42	@43
Upriver, fine, old....73	@74	Cameroon ball.....43	@44
Islands, coarse, new....45	@46	Flake and lumps.....29	@30
Islands, coarse, old....@		Accra flake.....17	@18
Upriver, coarse, new....56	@57	Accra buttons.....43	@44
Upriver, coarse, old....@		Accra strips.....47	@48
Cauchó (Peruvian) sheet 47	@48	Lagos buttons.....43	@44
Cauchó (Peruvian) ball 53	@54	Lagos strips.....47	@48
CENTRALS.		Madagascar, pinky....@	
Esmeralda, sausage...51	@52	Madagascar, black....@	
Guayaquil, strip.....47	@48	EAST INDIAN.	
Nicaragua, scrap....51	@52	Assam.....52	@53
Mangabeira, sheet....40	@41	Borneo.....30	@40

## Late Pará cables quote:

Per Kilo.		Per Kilo.	
Islands, fine.....	4\$300	Upriver, fine.....	5\$050
Islands, coarse.....	2\$200	Upriver, coarse.....	3\$550

Exchange, 12 3/4d.

## Last Manáos advices:

Upriver, fine.....	4\$750	Upriver, coarse.....	3\$050
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Exchange, 12 7/16d.

## NEW YORK RUBBER PRICES FOR APRIL (NEW RUBBER.)

1902.		1901.		1900.	
Upriver, fine.....	73 @74 1/2	85 @94	98 @102		
Upriver, coarse.....	59 @60	59 @68	73 @76		
Islands, fine.....	71 @73	84 @93	96 1/2 @99		
Islands, coarse.....	47 @49	52 @60	57 1/2 @60		
Cametá, coarse.....	53 @53 1/2	54 @63	63 @65		

In regard to the financial situation Albert B. Beers (broker in India-rubber, No. 58 William street, New York) advises us:

"There has been but little change in the situation during May from that prevailing in April, the demand for paper having been mostly from out-of-town banks, with rates ruling firm at 5 1/2 to 6 per cent. for the better class of paper, that not so well known being largely neglected. At the end of the month rates are easing, and a better demand exists.

## Para Rubber Statistics (Excluding Caucho).

	NEW YORK.		Total 1902.	Total 1901.	Total 1900.
	Fine and Medium.	Coarse.			
Stocks, March 31..... tons	*498	7	*505	929	640
Arrivals, April.....	1110	373	1483	2141	861
Aggregating.....	1608	380	1988	3070	1501
Deliveries, April.....	1132	364	1496	2076	651
Stocks, April 30.....	476	16	492	994	850

	PARÁ.			ENGLAND.		
	1902.	1901.	1900.	1902.	1901.	1900.
Stocks, March 31....	560	485	1030	1825	1346	1355
Arrivals, April.....	2655	1980	1600	2145	904	1140
Aggregating.....	3215	2465	2630	3970	2250	2495
Deliveries, April.....	975	2295	1840	3800	825	625
Stocks, April 30....	2240	170	790	170	1425	1870

	1902.			1901.			1900.		
World's supply, April 30.....	4,196			3,885			4,392		
Pará receipts, July 1 to April 30.....	23,599			21,746			23,450		
Pará receipts of Caucho, same dates.....	2,736			1,604					
Afloat from Pará to United States, April 30.....	674			861			333		
Afloat from Pará to Europe, April 30.....	620			435			549		

[\* Corrected figures.]

## Balata Exports Through Ciudad Bolívar, 1901.

EXPORTERS.	Kilos.	EXPORTERS.	Kilos.
Blohm & Co.....	315,776	B. Tomasi.....	3,033
Dalton & Co.....	220,458	A. Mattei.....	2,780
Pietranton Bros.....	164,896	J. Acquatella.....	1,820
Pietranton & Co.....	125,584	J. Frustuck.....	1,338
Sprick, Luis & Co.....	118,024	J. D. Figarella.....	1,000
M. Palazzi.....	82,084	Guillermo Montes.....	962
Wenzel & Co.....	79,487	D. Ma Batistini.....	600
J. Herbert.....	10,054	A. Batistini.....	468
Montes & Mönch.....	9,828		
H. Hahn.....	5,331	Total.....	1,143,023
Exports, 1900.....	1,218,767 kilos.	Value, 4,881,983 bolivars.	
Exports, 1901.....	1,143,023 kilos.	Value, 4,205,961 bolivars.	

[One Bolivar equals 19.3 cents gold.]

## EXPORTS through Ciudad Bolívar, by steamer Bolívar, March 11:

Dalton & Co., for Southampton.....	Kilos	29,125
Pietrantonio Bros., for Hamburg.....	"	9,695
Blohm & Co., for Havre.....	"	12,617
Pietrantonio & Co., for Hamburg.....	"	1,546
Sprick, Luis & Co., for Hamburg.....	"	4,435
Wenzel & Co., for Hamburg.....	"	6,248
Palazzi Bros., for Hamburg.....	"	1,306

LONDON imports of Balata, week ending May 1: 1050 bales.

May 8: 657 packages.

**The Lagos Rubber Output.**

THE INDIA RUBBER WORLD has obtained, through the courtesy of the customs officials at Lagos, West Africa, returns bringing up the record of the rubber output from that colony to the end of 1901, with the following result:

	1897.	1898.	1899.	1900.	1901.
Pounds.....	4,458,327	3,778,260	1,993,525	596,332	402,055
Value.....	£283,185	£285,410	£160,315	£48,239	£33,490

**Manaos Rubber Arrivals from Amazonas State.**

FROM RIVERS.	January.	February.	March.	Total.
Purús..... kilos.	1,886,449	1,417,952	1,120,436	4,424,837
Jurú.....	869,670	326,103	644,975	1,840,748
Solimões.....	221,778	156,741	350,927	729,446
Madeira.....	254,346	418,809	337,327	1,010,482
Others.....	102,271	75,575	61,444	239,290

Total..... 3,334,514 2,375,180 2,515,099= 8,244,803

Total, First quarter 1901..... 6,991,286

Total, First quarter 1900..... 7,799,985

[These figures embrace Caucho.]

**Bordeaux:**

ARRIVALS APRIL 1 TO MAY 15.

Grand Bassam..... kilos	7,300
Soudan.....	47,500
Conakry.....	32,000
Cassamance.....	41,000 127,800

STOCKS, MAY 15.

Soudan..... kilos	10,000
Cassamance.....	8,000
Java.....	5,000
Mexican.....	5,000
New Caledonia.....	1,400 29,400

PRICES [FRANCS PER KILOGRAM.]

Soudan sorts:	Cassamance:	
Twists, fine..... 6.80@6.90	A. P.....	6.80
Do good..... 6.60@6.75	A.....	5.50
Do ordinary... 6.40@6.50	A. M.....	4.50
Niggers, ordinary... 6.00@6.10	B.....	3.60
Do earthy..... 4.50@5.	Grand Bassam:	
Conakry:	Lump.....	3.85@4.10
Niggers, fine..... 7.15@7.20	Cakes.....	5.00@5.10
Do good..... 6.90@7.	Niggers.....	5.50@5.75
Do ordinary... 6.00@6.50		P. CHAUMEL.

**Antwerp.**

RUBBER STATISTICS FOR APRIL.

DETAILS.	1902.	1901.	1900.	1899.	1898.
Stocks, Mar. 31..... kilos	841,678	843,834	735,060	253,569	178,564
Arrivals April.....	307,834	613,368	507,911	447,919	173,757
Congo sorts.....	861,739	328,563	423,274	408,319	133,575
Other sorts.....	46,095	64,805	84,637	45,000	40,182
Aggregating.....	1,149,512	1,457,202	1,242,974	701,488	352,321
Sales in April.....	648,848	643,384	421,151	180,185	166,075
Stocks, April 30.	500,664	813,818	821,820	521,303	186,246
Arrivals since Jan. 1	1,809,323	2,186,678	2,284,225	1,209,864	661,601
Congo sorts.....	1,658,126	1,951,856	1,899,270	1,049,552	567,930
Other sorts.....	110,897	234,822	384,955	160,312	93,671
Sales since Jan. 1..	1,723,368	1,986,899	1,754,396	951,901	569,818

ARRIVALS AT ANTWERP.

APRIL 30.—By the *Stanleyville*, from the Congo:

W. Mallinckrodt & Co..... (Alimaferne) kilos	4,375
Ch. Dethier..... (La Haute Sangha)	2,600
Ch. Dethier..... (Société Belga)	21,000
Société Coloniale Anversoise..... (Cie. de Lomami)	5,100
Société Coloniale Anversoise..... (Cie. des Mag. Generaux)	4,800
L. & W. Van de Velde..... (Comptoirs Congolaise Velde)	8,500
Trafic Congolais.....	4,100
M. S. Cols..... (Centrale Africaine)	3,000
Société A B I R.....	3,900
Comptoir Commercial Congolais.....	38,900
Bunge & Co..... (Société Générale Africaine)	75,100
Bunge & Co..... (Société Anversoise)	12,200

Bunge & Co..... (Société Isanghi)	3,400
Bunge & Co..... (Comité Spécial Katanga)	13,200
Bunge & Co..... (Plantations Lacourt)	7,000
Société Coloniale Anversoise..... (Belge du Haut Congo)	40,000
Société Coloniale Anversoise..... (Sud Kamerun)	3,500
Société Coloniale Anversoise..... (La Djuma)	25,000 275,675

**Hamburg.**

TO THE EDITOR OF THE INDIA RUBBER WORLD: During the past week very little change has taken place in the Hamburg market, and the general quiet, for which, principally, the coming holidays were responsible, has not been disturbed. The sales remained within small quantities, and if prices for current sorts could be firmly maintained, it was owing to the fact that absolutely no excess of stock is on hand, and offers are very limited. The prices remained without change. Late quotations have been—in marks per kilogram:

Pará fine, hard cure.....	7.05	Congo Thimbles, fine black.....	4.80
Pará entrefine.....	6.80	Batanga ball.....	4.05
Bolivian fine.....	7.05	Bissao ball, fine.....	4.
Mollendo fine, old.....	7.	Bissao ball, good.....	3.50
Mozambique ball, red.....	6.20	Ecuador scrap.....	5.40
Mozambique ball, red and whitish.....	6.	Colombian scrap.....	5.25
Mozambique ball, black.....	5.60	Mangabeira, fine.....	4.80
Massal niggers, fine red.....	5.80	Mangabeira, good.....	4.50
Adeli fine, red.....	6.20	Bahia.....	3.30

Hamburg, May 13, 1902.

**London.**

EDWARD TILL & Co., under date of May 1, report stocks:

	1902.	1901.	1900.
Pará sorts..... tons	—	—	—
Borneo.....	126	172	128
Assam and Rangoon.....	35	38	21
Other sorts.....	458	631	458
Total.....	619	841	605

LIVERPOOL { Pará.....	2245	1440	1880
{ Other sorts.....	924	1316	1467

Total, United Kingdom.....	3788	3597	3952
Total, April 1.....	3326	3522	3104
Total, March 1.....	3078	2989	1917
Total, February 1.....	2674	3129	1848
Total, January 1.....	2794	2901	1855

PRICES PAID DURING APRIL.

	1902.	1901.	1900.
Pará fine, hard.....	3/0 @ 3/1 1/2	3/7 @ 3/11	4/1 1/2 @ 4/3 1/2
Pará fine, soft.....	3/0 1/2 @ 3/1 1/2		
Negroheads, scrappy.....	2/6 @ 2/6 1/2	2/6 1/2 @ 2/9	3/1
Do Islands.....	2/0	2/1 @ 2/3 1/2	2/4 1/2 @ 2/5
Bolivian.....	3/2	No sales.	4/3

**LEWIS & PEAT report [May 16]:**

*Pará*.—The market continues very dull and business difficult. A fair quantity of hard cure has changed hands on the spot at 3s. 1d. for fine and at 2s. 11d. for entrefine, but there are reports of sales at 3s. 1/2d. to 3s. 3/4d. since. For delivery sales have been made at 3s. 1d. for June, 3s. 1 1/2d. for July, and 3s. 1 3/4d. for August, but closing quotations are 1/4d. less, but few sellers. Scrappy negroheads dull at 2s. 5d. to 2s. 5 1/2d. and no Islands offering. Cametá 2s. 3d. sellers.

Peruvian ball very firm, and the sales amount to 60 or 70 tons at 2s. 4 1/2d. to 2s. 5d. for fair to good. Slab neglected at 3s. 1/2d., and no business in fine reported. Small sales of Mollendo at 3s. for fine and at 2s. 10d. for entrefine. Medium sorts very quiet. No auctions this week.

**Liverpool.**

WILLIAM WRIGHT & Co. report [May 1]: "*Fine Pará*.—Prices during the early part of the month declined, partly owing to an incorrect estimate of crop receipts by one of the large operators; toward the close there is a little more firmness, but the demand is dull. If next month's [May] receipts turn out as anticipated we may see a further advance in prices. There has been a fair business both on spot and for delivery at current rates, closing prices being 3s. 2d. spot and near; but as



regards forward, owing to the uncertainty of supplies, sellers are unwilling to offer. Some small lots are offered speculatively now and then just to test the market. *African* in steady demand at current rates."

## IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

May 8.—By the steamer *Basil*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total
New York Commercial Co.	285,600	47,700	57,100	20,400	410,800
Reimers & Co.	210,600	42,900	66,000	41,400	360,900
A. T. Morse & Co.	110,600	23,100	33,400	7,600	224,700
United States Rubber Co.	113,100	19,400	23,200	51,200	206,900
Boston Rubber Shoe Co.	33,500	6,400	6,200	25,400	71,500
Edmund Reeks & Co.	1,900	900	200	39,100	42,100
Goodyear Rubber Co.	12,000		8,800		20,800

Total ..... 776,300 140,400 244,900 185,100=1,346,700

May 13.—By the steamer *Fluminense*, from Pará:

New York Commercial Co.	67,700	15,200	45,900	1,500	130,300
Reimers & Co.	13,200	2,500	33,300	1,300	50,400
A. T. Morse & Co.	2,200	2,600	24,000		28,800
Boston Rubber Shoe Co.	24,000	2,300	1,400	1,000	28,700

Total ..... 107,100 22,600 104,600 3,800= 238,100

May 24.—By the steamer *Hubert*, from Pará and Manáos:

New York Commercial Co.	193,700	49,500	91,300	28,800	363,300
Reimers & Co.	147,100	29,600	67,700	47,600	292,000
A. T. Morse & Co.	96,000	13,500	38,500	3,100	151,100
United States Rubber Co.	63,200	6,400	8,400	22,300	100,300
Boston Rubber Shoe Co.	31,600	3,400	4,200	44,300	83,500
Ed. Reeks & Co.	17,700	2,700	700		21,100
G. Amsinck & Co.				1,700	1,700

Total ..... 549,300 105,100 210,800 147,800= 1,013,000

[NOTE.—The Steamer *Benedict* from Pará, is due at New York June 3, with 175 tons of Rubber and 100 tons Caucho.]

## PARA RUBBER VIA EUROPE.

MAY 3.—By the *Lucania*=Liverpool:

Reimers & Co. (Coarse).....	11,500
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## FROM THE ORINOCO.

MAY 15.—By the <i>Prins Fredrick Hendrik</i> =Bolívar:	
Thebaud Brothers (Fine).....	10,700
Thebaud Brothers (Medium).....	700
Thebaud Brothers (Coarse).....	4,000 15,400

## OTHER ARRIVALS AT NEW YORK

## CENTRALS.

APRIL 24.—By the <i>Baron</i> =Bahia:	
J. H. Rossbach & Bros.....	8,700
Booth & Co.....	1,600 10,300

APRIL 26.—By the *Umbria*=Liverpool:

Reimers & Co.....	10,300
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APRIL 28.—By the *Proteus*=New Orleans:

A. T. Morse & Co.....	2,000
Eggers & Heinlein.....	1,000 3,000

APRIL 26.—By the *Pennsylvania R. R.*=New Orleans:

G. Amsinck & Co.....	3,500
Silva Bussenius & Co.....	2,000
W. Loiza & Co.....	1,000
L. N. Chemedlin & Co.....	1,200 7,700

APRIL 29.—By the *Alleghany*=Savannah:

Mecke & Co.....	2,000
I. Brandon & Bros.....	1,500
Kunhardt & Co.....	1,500
G. Amsinck & Co.....	1,000
Punderford & Co.....	700
Suzotte & Whitney.....	300
Jimenez & Escobar.....	300
Lawrence Johnson & Co.....	900
H. Fabelin & Co.....	400 8,600

APRIL 30.—By the *Moltke*=Hamburg:

J. H. Rossbach & Bros.....	10,000
A. T. Morse & Co.....	1,100 11,100

APRIL 30.—By the *Eldorado*=New Orleans:

A. T. Morse & Co.....	8,000
A. N. Rotholz.....	1,500
Eggers & Heinlein.....	300 7,800

MAY 5.—By the *Havana*=Mexico:

Thebaud Brothers.....	3,000
F. Probat & Co.....	1,500
Graham Hincley & Co.....	1,000
H. Marquardt & Co.....	800
For Europe.....	6,000 12,300

MAY 5.—By the *Comus*=New Orleans:

A. T. Morse & Co.....	5,000
A. N. Rotholz.....	2,000
T. N. Morgan.....	1,000 8,000

MAY 7.—By the *Advance*=Colon:

Isaac Brandon & Bros.....	3,600
R. Fablen & Co.....	600 4,200

MAY 7.—By the *Alba*=New Orleans:

A. T. Morse & Co.....	3,300
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MAY 6.—By the *Alene*=Greentown:

G. Amsinck & Co.....	6,000
E. B. Strout.....	3,500
Livingstone & Co.....	2,000
Lawrence Johnson & Co.....	2,000
Jimenez & Escobar.....	500
Samper & Co.....	500
J. A. Paul & Co.....	200
Kunhardt & Co.....	200 15,000

## CENTRALS—Continued.

MAY 9.—By the <i>Wordsworth</i> =Bahia:	
J. H. Rossbach & Bros.....	18,500

MAY 12.—By the *Esperanza*=Mexico:

E. Steiger & Co.....	2,000
Thebaud Brothers.....	2,000
Graham Hincley & Co.....	800
H. Marquardt & Co.....	2,500
American Trading Co.....	400 7,700

MAY 12.—By the *Altai*=Savannah:

Kunhardt & Co.....	2,500
Jimenez & Escobar.....	300
D. A. Delima & Co.....	3,500
L. Johnson & Co.....	1,000 7,300

MAY 12.—By the *Louisiana*=New Orleans:

A. T. Morse & Co.....	1,000
J. A. Medina.....	700 1,700

MAY 13.—By the *Alliance*=Colon:

G. Amsinck & Co.....	6,200
Hirzel, Feltman & Co.....	6,000
American Trading Co.....	3,400
E. B. Strout.....	1,500
Harburger & Stack.....	1,500
Kunhardt & Co.....	1,300
Dumarest & Co.....	1,300
L. N. Chemedlin & Co.....	1,000
W. R. Grace & Co.....	600
A. Santos & Co.....	600
Mecke & Co.....	300
Thebaud Brothers.....	800 24,800

MAY 19.—By the *Proteus*=New Orleans:

A. T. Morse & Co.....	1,000
For Europe.....	1,000 2,000

MAY 20.—By the *Athos*=Greentown:

E. B. Strout.....	4,000
G. Amsinck & Co.....	2,000
A. D. Straus & Co.....	500
D. A. Delima & Co.....	4,500
Kunhardt & Co.....	200 11,200

MAY 20.—By the *El Rio*=New Orleans:

A. T. Morse & Co.....	3,700
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MAY 20.—By the *Finance*=Colon:

R. Fabelin & Co.....	5,500
Hirzel, Feltman & Co.....	2,100
H. Marquardt & Co.....	2,000
W. Loiza & Co.....	600
E. N. Tibbals & Co.....	400
For Europe.....	1,000 11,600

MAY 20.—By the *Tennyson*=Bahia:

J. H. Rossbach & Bros.....	37,500
Booth & Co.....	500 38,000

MAY 21.—By the *El Dorado*=New Orleans:

A. T. Morse & Co.....	9,000
Rubber & Celluloid Harness Trim-	
ming Co.....	2,500
A. N. Rotholz.....	1,500 13,000

## AFRICAN.

APRIL 28.—By the *Umbria*=Liverpool:

George A. Alden & Co.....	28,500
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APRIL 30.—By the *Georgie*=Liverpool:

Otto Meyer (Boston).....	29,000
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APRIL 30.—By the *Moltke*=Hamburg:

Otto Meyer (Boston).....	2,500
A. T. Morse & Co.....	2,000 4,500

APRIL 30.—By the *Friesland*=Antwerp:

Reimers & Co.....	115,000
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## AFRICANS—Continued.

A. T. Morse & Co.....	34,000
Joseph Cantor.....	14,000
For Boston.....	56,000 219,000

MAY 1.—By the *Majestic*=Liverpool:

George A. Alden & Co.....	41,500
Reimers & Co.....	18,500
Joseph Cantor.....	4,600 61,500

MAY 2.—By the *British Princess*=Antwerp:

William Wright & Co.....	6,500
A. T. Morse & Co.....	6,500 13,000

MAY 3.—By the *Lucania*=Liverpool:

Reimers & Co.....	11,500
A. T. Morse & Co.....	3,000
H. A. Gould & Co.....	2,000 16,500

MAY 5.—By the *Celtic*=Liverpool:

George A. Alden & Co.....	67,600
Otto Meyer (Boston).....	12,000
A. T. Morse & Co.....	11,000 90,600

MAY 5.—By the *Rotterdam*=Rotterdam:

A. T. Morse & Co.....	64,000
Reimers & Co.....	44,000 108,000

MAY 5.—By the *Panama*=Bordeaux:

George A. Alden & Co.....	17,500
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MAY 5.—By the *Ethiopia*=Glasgow:

Reimers & Co.....	22,500
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MAY 6.—By the *Southwark*=Antwerp:

George A. Alden & Co.....	331,000
Reimers & Co.....	147,000
A. T. Morse & Co.....	6,000
For Boston.....	67,000 551,000

MAY 8.—By the *Patricia*=Hamburg:

Otto Meyer (Boston).....	44,000
George A. Alden & Co.....	11,500
Frank Greene.....	6,500 62,000

MAY 12.—By the *Vaderland*=Antwerp:

A. T. Morse & Co.....	8,000
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MAY 8.—By the *Germania*=Liverpool:

Otto Meyer (Boston).....	11,500
George A. Alden & Co.....	4,500 16,000

MAY 12.—By the *Saxonia*=Liverpool:

Otto Meyer (Boston).....	12,000
Reimers & Co.....	7,000
H. A. Gould & Co.....	5,500 24,500

MAY 15.—By the *Teutonic*=Liverpool:

George A. Alden & Co.....	11,500
A. T. Morse & Co.....	6,000 17,500

MAY 16.—By the *Bohemian*=Liverpool:

George A. Alden & Co.....	67,000
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MAY 17.—By the *Peninsular*=Lisbon:

Reimers & Co.....	45,000
A. T. Morse & Co.....	22,500 67,500

MAY 19.—By the *Cymric*=Liverpool:

Mark Hydes & Co.....	4,500
Rubber Trading Co.....	2,500
Joseph Cantor.....	1,000 8,000

## EAST INDIAN.

MAY 7.—By the *Louther Castle*=Singapore:

William Wright & Co.....	22,500
G. D. Watt.....	22,500
Windmuller & Reolker.....	13,500
Winter & Smillie.....	5,500 64,000

## EAST INDIANS—Continued.

## PONTIANAK.

MAY 7.—By the <i>Louther Castle</i> =Singapore:	
Reimers & Co.....	443,000
George A. Alden & Co.....	435,000
Robert Brauss & Co.....	160,000
Robinson & Tallman.....	106,000, 143,000

## GUTTA-PERCHA AND BALATA.

APRIL 30.—By the <i>Manitou</i> =London:	
Spaulding Mfg. Co.....	3,500
To order.....	2,500 6,000
MAY 5.—By the <i>Minchaha</i> =London:	
Spaulding Manufacturing Co.....	4,500
MAY 7.—By the <i>Louther Castle</i> =Singapore:	
Pierre F. Betts.....	12,500
MAY 8.—By the <i>Cercis</i> =Liverpool:	
For Boston.....	60,000
Reimers & Co.....	2,500
Robinson & Tallman.....	2,500 65,000

## BALATA.

APRIL 30.—By the <i>Manitou</i> =London:	
Earle Brothers.....	2,500
MAY 2.—By the <i>Maraval</i> =Trinidad:	
Thebaud Brothers.....	2,000
G. Amsinek & Co.....	1,500
George A. Alden & Co.....	1,500 5,000
MAY 5.—By the <i>Minchaha</i> =London:	
Reimers & Co.....	3,500
MAY 12.—By the <i>Grenada</i> =Trinidad:	
George A. Alden & Co.....	13,500
G. Amsinek & Co.....	2,000 15,500

## BALATA—Continued.

MAY 15.—By the <i>Prins Frederick Hendrik</i> =Trinidad:	
Thebaud Brothers.....	2,500
George A. Alden & Co.....	1,500
G. Amsinek & Co.....	1,000 5,000

## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—APRIL.

Imports:	POUNDS.	VALUE.
India-rubber.....	4,989,064	\$2,462,928
Gutta-jelutong (Pontianak) ..	1,498,737	43,978
Total.....	6,487,801	\$2,486,905
Exports:		
India-rubber.....	112,780	\$60,809
Reclaimed rubber.....	147,749	18,985
Rubber Scrap Imported.....	449,360	\$29,591

## BOSTON ARRIVALS.

	POUNDS.
APRIL 3.—By the <i>Cambrian</i> =Liverpool:	
Robinson & Tallman—African.....	3,236
APRIL 4.—By the <i>Lancastrian</i> =Liverpool:	
George A. Alden & Co.—African.....	7,096
APRIL 8.—By the <i>Southwark</i> =Antwerp:	
George A. Alden & Co.—African.....	35,200
APRIL 10.—By the <i>Devonian</i> =Liverpool:	
George A. Alden & Co.—African.....	9,466
APRIL 14.—By the <i>Sachem</i> =Liverpool:	
George A. Alden & Co.—African.....	4,485
Reimers & Co.—African.....	11,393 15,788

APRIL 16.—By the <i>Cestrian</i> =Liverpool:	
George A. Alden & Co.—African.....	23,135
APRIL 16.—By the <i>Nubia</i> =Hamburg:	
Otto Meyer—African.....	2,891
APRIL 17.—By the <i>Anglian</i> =London:	
George A. Alden & Co.—African.....	2,361
APRIL 20.—By the <i>Sagamore</i> =Liverpool:	
Reimers & Co.—Caucho.....	16,000
Reimers & Co.—African.....	8,830
George A. Alden & Co.—Caucho.....	4,200
George A. Alden & Co.—African.....	7,005 26,035
APRIL 24.—By the <i>Philadelphian</i> =Liverpool:	
Reimers & Co.—Caucho.....	44,046
APRIL 25.—By the <i>Virginian</i> =London:	
Reimers & Co.....	22,349
APRIL 28.—By the <i>Michigan</i> =London:	
George A. Alden & Co.—African.....	21,166
APRIL 28.—By the <i>Kansas</i> =Liverpool:	
Samples.....	27
APRIL 28.—By the <i>Michigan</i> =Liverpool:	
Reimers & Co.—Coarse Para.....	11,494
Reimers & Co.—African.....	11,600 22,494
Total Imports.....	246,320
[Value, \$112,286.]	
GUTTA-PERCHA.	
APRIL 14.—By the <i>Sachem</i> =Liverpool:	
George A. Alden & Co.....	4,527
APRIL 16.—By the <i>Nubia</i> =Hamburg:	
C. H. Arnold & Co.....	9,573
APRIL 19.—By the <i>Alessinia</i> =Hamburg:	
C. H. Arnold & Co.....	4,126
Total.....	18,226

## APRIL EXPORTS OF INDIA-RUBBER FROM PARA.

IN KILOGRAMS. 1000 KILOGRAMS=2204.6 POUNDS.

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL.
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Cmok, Prusse & Co.....	73,092	15,698	58,275	640	147,705	88,139	17,506	35,921	600	142,166	289,871
Frank da Costa & Co.....	113,675	21,618	67,225	2,404	204,922	33,998	4,094	58,776	—	96,868	301,790
Adelbert H. Alden.....	220,159	41,524	70,701	1,786	334,170	52,621	6,359	19,756	3,483	82,219	416,389
Kanthack & Co.....	—	—	—	—	—	2,516	395	4,094	—	7,005	7,005
Neale & Staats.....	—	—	—	—	—	1,515	170	1,872	23,756	27,313	27,313
Denis Crouan & Co.....	—	—	—	—	—	2,513	322	2,950	—	5,785	5,785
B. A. Antunes & Co.....	650	576	3,620	—	4,846	—	—	—	—	—	4,846
R. Suarez.....	—	—	—	—	—	36,619	6,655	9,304	129	52,708	52,708
Direct from Itacoatiara.....	—	—	—	—	—	3,730	—	1,214	—	4,944	4,944
Direct from Manaos.....	236,934	49,940	70,293	196,378	553,545	383,048	86,093	119,731	278,594	867,466	1,421,011
Total for April.....	644,510	129,356	270,114	201,208	1,245,188	604,699	121,595	253,618	306,562	1,286,474	2,531,662
Total for July-March.....	5,676,018	1,456,391	3,437,926	708,910	11,279,245	7,673,503	1,464,320	2,116,280	1,430,987	12,685,090	23,964,335
TOTAL, CROP YEAR.....	6,320,528	1,585,747	3,708,040	910,118	12,524,433	8,278,202	1,585,915	2,369,898	1,737,549	13,971,564	26,495,997

## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (IN POUNDS).

UNITED STATES.				GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1902.....	4,884,637	448,180	4,436,457	March, 1902.....	4,878,160	1,950,368	2,927,792
January-February.....	9,621,307	492,495	9,128,812	January-February.....	9,002,448	5,225,248	3,777,200
Three months, 1902.....	14,505,944	940,675	13,565,269	Three months, 1902.....	13,880,608	7,175,616	6,704,992
Three months, 1901.....	15,886,510	850,607	15,035,903	Three months, 1901.....	14,823,872	4,727,632	10,096,240
Three months, 1900.....	15,919,121	1,361,421	13,557,700	Three months, 1900.....	16,358,272	6,133,216	10,225,056
GERMANY.				ITALY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
March, 1902.....	2,341,240	970,860	1,370,380	March, 1902.....	59,620	220	59,400
January-February.....	4,695,460	1,711,260	2,984,200	January-February.....	310,640	42,240	268,400
Three months, 1902.....	7,036,700	2,682,020	4,354,680	Three months, 1902.....	370,260	42,460	327,800
Three months, 1901.....	6,482,080	1,321,540	5,160,540	Three months, 1901.....	479,160	69,080	410,080
Three months, 1900.....	8,404,440	3,112,120	5,292,320	Three months, 1900.....	407,440	—	407,440

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\*Figures in this line corrected since last month.







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